

**New Rock Technologies, Inc.**

## **OM Series IP Telephony System**

# **Administrator Manual**

OM12

OM80

OM200

<http://www.newrocktech.com>

Tel: +86 21-61202700

Fax: +86 21-61202704

Document Version: AA0-E001-N



## Manual Description

---

This manual is applicable to New Rock's OM series office IP telephony system (referred to as the "device") with firmware release version 74. It describes how to use Web utility to manage the device, including parameter configuration and maintenance operation such as firmware upgrade, capturing log files and etc. Notice that some frequent used parameters can be configured on a phone, as described in OM's **User Manual**.

# Contents

---

|                                                             |            |
|-------------------------------------------------------------|------------|
| <b>1 Start.....</b>                                         | <b>1-1</b> |
| 1.1 Logon to the Device .....                               | 1-1        |
| 1.2 Directory of Web Pages .....                            | 1-2        |
| 1.3 Network Settings.....                                   | 1-2        |
| 1.4 Port Forwarding .....                                   | 1-3        |
| <b>2 Auto Attendant.....</b>                                | <b>2-1</b> |
| 2.1 Operators/Receptionists .....                           | 2-1        |
| 2.2 Greetings .....                                         | 2-2        |
| 2.2.1 Factory Default Greetings.....                        | 2-2        |
| 2.2.2 Changing the Greetings.....                           | 2-2        |
| 2.3 Greeting Repeat.....                                    | 2-6        |
| 2.4 Playing Greetings Depending on Business Hours .....     | 2-6        |
| 2.5 Assigning a Designated Greeting for a Trunk .....       | 2-7        |
| <b>3 Settings of Extensions .....</b>                       | <b>3-1</b> |
| 3.1 Making Outbound Calls.....                              | 3-1        |
| 3.2 Hunt Group .....                                        | 3-2        |
| 3.3 Outbound Call Barring .....                             | 3-2        |
| 3.4 Group Call Pick up .....                                | 3-3        |
| 3.5 Fax.....                                                | 3-4        |
| 3.6 Soft Attendant Console .....                            | 3-4        |
| 3.7 Transferring an Incoming Call to an External Party..... | 3-5        |
| 3.8 Other Features.....                                     | 3-5        |
| 3.9 Secretary Assistant.....                                | 3-6        |
| <b>4 Trunk.....</b>                                         | <b>4-1</b> |
| 4.1 Direct Inward Dialing (DID) .....                       | 4-1        |
| 4.2 Caller ID Detection on Line Port .....                  | 4-1        |
| 4.3 SIP Trunk Registration to an ITSP .....                 | 4-2        |
| <b>5 Multi-site Telephony Network.....</b>                  | <b>5-1</b> |
| 5.1 Multi-site Network with Simple Dialing Scheme .....     | 5-1        |
| 5.2 Multi-site Network with Complex Dialing Scheme .....    | 5-3        |
| 5.2.1 Configuration of Managing Device.....                 | 5-3        |
| 5.2.2 Regular Site.....                                     | 5-6        |
| <b>6 Device Settings .....</b>                              | <b>6-1</b> |
| 6.1 Time.....                                               | 6-1        |

|                                                          |            |
|----------------------------------------------------------|------------|
| 6.2 Changing the Administrator Password.....             | 6-1        |
| 6.3 SIP Client Account.....                              | 6-2        |
| 6.4 Call Recording and Voicemail.....                    | 6-3        |
| 6.5 Analog Trunk Port Settings.....                      | 6-4        |
| 6.6 Analog Phone Port Settings.....                      | 6-5        |
| 6.7 DTMF.....                                            | 6-5        |
| 6.8 Voice Media Settings.....                            | 6-6        |
| 6.9 SIP Related Advanced Settings.....                   | 6-7        |
| 6.10 Dial Number Detection and Digit Map.....            | 6-7        |
| 6.11 Feature Codes.....                                  | 6-8        |
| 6.12 Call Detailed Record.....                           | 6-9        |
| 6.13 Selective Inbound Call Blocking.....                | 6-10       |
| 6.14 Outbound Call Screening.....                        | 6-10       |
| <b>7 Maintenance .....</b>                               | <b>7-1</b> |
| 7.1 Firmware Upgrading .....                             | 7-1        |
| 7.2 System Reboot .....                                  | 7-2        |
| 7.3 Export Configuration Files.....                      | 7-3        |
| 7.4 Import Configuration Files.....                      | 7-4        |
| <b>8 Appendix: Registering a SIP Terminal to OM.....</b> | <b>8-1</b> |
| 8.1 Softphone .....                                      | 8-1        |
| 8.2 SIP Phone.....                                       | 8-3        |

## Contents of Figure

---

|                                                           |     |
|-----------------------------------------------------------|-----|
| Figure 1-1 Login interface .....                          | 1-1 |
| Figure 1-2 Directory interface .....                      | 1-2 |
| Figure 1-3 Network setting interface .....                | 1-3 |
| Figure 1-4 Port forwarding interface of router .....      | 1-3 |
| Figure 1-5 Domain name setting interface .....            | 1-4 |
| Figure 1-6 Network setting interface .....                | 1-4 |
| Figure 2-1 Auto-Attendant setting interface .....         | 2-1 |
| Figure 2-2 DNS service interface .....                    | 2-2 |
| Figure 2-3 Interface to enter the text of greeting .....  | 2-3 |
| Figure 2-4 Interface to save the greeting files .....     | 2-3 |
| Figure 2-5 Interface to select greeting files .....       | 2-4 |
| Figure 2-6 Interface to managing the greeting files ..... | 2-4 |
| Figure 2-7 Greeting setting interface .....               | 2-5 |
| Figure 2-8 Auto-attendant interface .....                 | 2-6 |
| Figure 2-9 Time schedule setting interface .....          | 2-7 |
| Figure 2-10 Greeting setting interface .....              | 2-7 |
| Figure 3-1 Outbound calls setting interface .....         | 3-1 |
| Figure 3-2 Hunt group setting interface .....             | 3-2 |
| Figure 3-3 Outbound call barring setting interface .....  | 3-3 |
| Figure 3-4 Group setting interface .....                  | 3-3 |
| Figure 3-5 Group assigning interface .....                | 3-3 |
| Figure 3-6 FAX setting interface .....                    | 3-4 |
| Figure 3-7 Soft attendant console setting interface ..... | 3-5 |
| Figure 3-8 Outbound transfer setting interface .....      | 3-5 |
| Figure 3-9 Extension's feature setting interface .....    | 3-6 |
| Figure 3-10 Extension feature interface .....             | 3-7 |
| Figure 3-11 Auto attendant configuration interface .....  | 3-7 |
| Figure 4-1 DID interface .....                            | 4-1 |
| Figure 4-2 CID detect setting interface 1 .....           | 4-1 |
| Figure 4-3 CID detect setting interface 2 .....           | 4-2 |
| Figure 4-4 IP trunk registration setting interface .....  | 4-2 |
| Figure 4-5 IP trunk setting interface .....               | 4-2 |
| Figure 4-6 Registration status interface .....            | 4-3 |
| Figure 5-1 Multi-site scenarios .....                     | 5-1 |
| Figure 5-2 Auto discovery of devices .....                | 5-2 |
| Figure 5-3 Device list setting interface .....            | 5-2 |
| Figure 5-4 Domain name interface .....                    | 5-4 |
| Figure 5-5 Multi-site scenarios setting interface .....   | 5-4 |
| Figure 5-6 Role selecting interface .....                 | 5-4 |
| Figure 5-7 Device list setting interface .....            | 5-5 |
| Figure 5-8 Prefix setting interface .....                 | 5-5 |
| Figure 5-9 Trunk sharing interface .....                  | 5-6 |
| Figure 5-10 Domain name setting interface .....           | 5-6 |

|                                                          |      |
|----------------------------------------------------------|------|
| Figure 5-11 Interface of multi-site scenarios .....      | 5-7  |
| Figure 5-12 Interface of site role .....                 | 5-7  |
| Figure 5-13 Managing site address interface.....         | 5-7  |
| Figure 5-14 Multi-site networking status interface.....  | 5-8  |
| Figure 6-1 System time interface .....                   | 6-1  |
| Figure 6-2 Interface of changing password.....           | 6-2  |
| Figure 6-3 IP extension interface .....                  | 6-2  |
| Figure 6-4 Adding IP extension in bulk interface.....    | 6-3  |
| Figure 6-5 Recording/Voicemail interface .....           | 6-3  |
| Figure 6-6 Interface of extension features .....         | 6-4  |
| Figure 6-7 Interface of mail server settings.....        | 6-4  |
| Figure 6-8 Trunk setting interface .....                 | 6-5  |
| Figure 6-9 Analog phone port setting interface .....     | 6-5  |
| Figure 6-10 DTMF setting interface .....                 | 6-6  |
| Figure 6-11 Media setting interface .....                | 6-6  |
| Figure 6-12 SIP related advanced setting interface ..... | 6-7  |
| Figure 6-13 Dialing interface .....                      | 6-8  |
| Figure 6-14 Feature codes interface .....                | 6-9  |
| Figure 6-15 CDR server setting interface.....            | 6-9  |
| Figure 6-16 Incoming call blocking interface.....        | 6-10 |
| Figure 6-17 Interface of call screening.....             | 6-11 |
| Figure 7-1 Firmware upgrading interface .....            | 7-1  |
| Figure 7-2 Interface of upgrade firmware .....           | 7-2  |
| Figure 7-3 Firmware upgrading interface .....            | 7-2  |
| Figure 7-4 System restarting interface.....              | 7-3  |
| Figure 7-5 Exporting configuration files interface.....  | 7-3  |
| Figure 7-6 Importing configuration files interface ..... | 7-4  |
| Figure 8-1 Account creating interface .....              | 8-1  |
| Figure 8-2 X-Lite login interface .....                  | 8-2  |
| Figure 8-3 X-Lite registration interface.....            | 8-3  |
| Figure 8-4 SIP phone configuration interface.....        | 8-4  |

# Contents of Table

---

Table 2-3 Recording the greeting file on a phone ..... 2-4

Table 3-1 Dial scheme parameters ..... 3-1

Table 3-2 Hunt group parameters..... 3-2

Table 3-3 Extension feature related parameters ..... 3-6

Table 5-1 Multi-site network parameters..... 5-2

Table 6-1 Description of media parameters ..... 6-6

Table 6-2 Description of Digit map..... 6-8

# 1 Start

## 1.1 Logon to the Device

**Step1** Connect your PC to the device

Using a CAT5 cable to connect the device to the local network where the PC is connected, or connect the device directly to the PC.

**Step2** Obtain the IP address

Plug an analog phone to one of the Phone ports on the device; pick up the phone and listen to the announcement after dialing ##.

**Step3** Login to the Web utility

Enter the device IP address in the browser address bar on your PC, and select English on the logon interface. After entering the password, click **Login**.

Figure 1-1 Login interface



Table 1-1 Login parameters

| Item     | Description        |
|----------|--------------------|
| Language | Select a language. |

| Item     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Role     | <p>The Web utility provides two authority levels, administrator and operator.</p> <ul style="list-style-type: none"> <li>• An administrator is allowed to make changes to any configuration and login passwords.</li> <li>• An operator is allowed to navigate configuration pages and make limited changes to configurations.</li> <li>• The device allows multiple users to login, in which case the administrator has the authority of changing the configuration while the operator is limited to read the configuration only. In any situation, there is only one user allowed to make changes to configurations.</li> </ul> |
| Password | <b>admin</b> by default.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



Note

- Before login to the Web utility, make sure the PC and the device are on the same subnet.
- Please change the default password after your first time login to the Web utility and keep it secure. See Chapter [6.2 Changing the administrator password](#).

## 1.2 Directory of Web Pages

If you are unfamiliar with the organization of the Web utility, the directory links on the top of the interface can help you to navigate the Web pages based on the tasks you would like to perform.

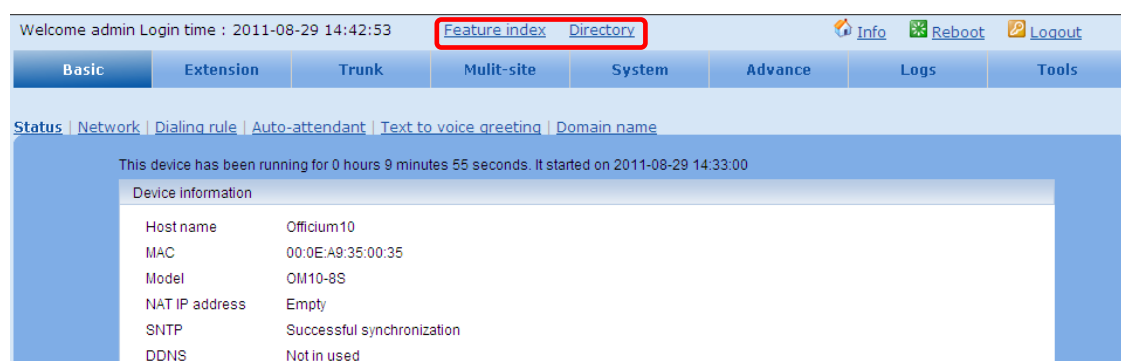
### Feature Index

The index of features and functions directs you to the intended pages.

### Directory

The sitemap of the Web utility is presented.

**Figure 1-2 Directory interface**



## 1.3 Network Settings

The networks settings may need to be changed based on the installation conditions.

Go to the **Basic > Network** page for network settings. See Fig. 1-3.

**Figure 1-3 Network setting interface**

The screenshot shows a web-based configuration interface with a top navigation bar containing tabs: Basic, Extension, Trunk, Mult-site, System, Advance, Logs, and Tools. Below the navigation bar is a breadcrumb trail: Status > Network > Dialing rule > Auto-attendant > Text to voice greeting > Domain name. The main content area is titled 'Ethernet port' and contains the following fields:

|                       |                   |                                                                                          |
|-----------------------|-------------------|------------------------------------------------------------------------------------------|
| Host name             | Officium10        | Only letters (a-z), numbers (0-9) and dash (-) are allowed, and must start with a letter |
| MAC                   | 00:0E:A9:35:00:35 |                                                                                          |
| IP address assignment | DHCP              |                                                                                          |
| IP address            | Static            | 50.193                                                                                   |
| Netmask               | 255.255.255.0     |                                                                                          |
| Gateway IP address    | 192.168.2.1       |                                                                                          |

**Table 1-2 Network parameters**

| Item   | Description                                                                                                 |
|--------|-------------------------------------------------------------------------------------------------------------|
| Static | To assign a static IP address. This is the default setting.                                                 |
| DHCP   | Use the dynamic host configuration protocol (DHCP) to allocate IP addresses.                                |
| PPPoE  | Select PPPoE when ADSL modem is connected to the device, and enter username and password obtained from ISP. |

## 1.4 Port Forwarding

Port forwarding is used to permit external hosts to communicate with the device installed behind a router in a private local area network. Such communication is required in remote device management, SIP terminal registration to the device and the SIP trunk between the device and an external device.

The port forwarding is configured on the router, and the example of the configuration on a router is illustrated in Fig. 1-4.

**Figure 1-4 Port forwarding interface of router**

The screenshot shows a 'Ports - Custom Services' configuration window. The fields are as follows:

|                   |                |
|-------------------|----------------|
| Service Name      | SIP            |
| Service Type      | UDP            |
| Starting Port     | 5060 (1~65535) |
| Ending Port       | 5060 (1~65535) |
| Server IP Address | 10.10.10.104   |

Below the fields are 'Apply' and 'Cancel' buttons. A red rectangle highlights the Service Name, Service Type, Starting Port, Ending Port, and Server IP Address fields.

**The WAN port IP address of the router is static**

Go to the **Basic > Domain name** page and enter WAN port IP address of the router. See Fig. 1-5.

**Figure 1-5 Domain name setting interface**

Basic Extension Trunk Multi-site System Advanced Logs Tools

Status | Network | Dialing rule | Auto-attendant | Text to voice greeting | **Domain name**

Domain name  e.g. 220.248.100.68 or myom.com

Domain name is used in SIP terminal registration and multi-site application

Select a domain name based on network scenario:

Scenario 1: SIP terminals and the device are on the same LAN

Fill in "Domain name" with device IP address or a stream of www.xxx.com format

Scenario 2: Some SIP terminals are registered from Internet

Fill in "Domain name" with Internet domain name if the device has one

Fill in "Domain name" with Internet address if the device has one

If you already have a DDNS account, fill in the field with the DDNS domain name

Submit Refresh

**The WAN port of the router does not have a fixed IP address**

Go to the **Basic > Network** page to enable STUN.

**Figure 1-6 Network setting interface**

Basic Extension Trunk Multi-site System Advanced Logs Tools

Status | **Network** | Dialing rule | Auto-attendant | Text to voice greeting | Domain name

Ethernet port

MAC 00:0E:A9:50:01:13

IP address assignment DHCP

IP address 192.168.250.126

Netmask 255.255.0.0

Gateway IP address 192.168.2.1

DNS

Enable ☒

Primary server 192.168.2.1 e.g. 202.96.209.6

Secondary server e.g. 202.96.209.133

System time

Current time 2011-08-30 16:59:32 YYYY-MM-DD HH:MM:SS Change

Primary server 192.43.244.18

Secondary server 198.60.22.240

Query interval (min) 120

Time zone (GMT+08:00) Beijing

STUN

STUN Periodic

STUN server e.g. 20.125.2.29

Submit Refresh

**Table 1-3 Network parameters**

| Item        | Description                                                                                                                                                                                                                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STUN        | <p>Select a trigger for launching STUN inquiry:</p> <ul style="list-style-type: none"> <li>Startup: make inquiry for the SIP signaling when the App activated</li> <li>Periodical: periodically make inquiry</li> <li>Periodic &amp; RTP: periodically make inquiry for both SIP signaling and RTP stream</li> </ul> |
| STUN Server | Enter the IP address of STUN server, such as 20.125.2.29.                                                                                                                                                                                                                                                            |

## 2 Auto Attendant

### 2.1 Operators/Receptionists

In conjunction with the auto attendant function, the device supports manual call transfer to extensions. Up to five operator phones can be connected to the device. By factory default, the first Phone port is reserved to the operator with extension number 200.

Click **Basic** > **Auto Attendant** to add more operators or to change auto attendant related settings. See Figure 2-1.

**Figure 2-1 Auto-Attendant setting interface**

The screenshot displays the 'Auto-attendant' configuration page. The 'Operator' section is highlighted with a red box. It contains the following fields and options:

- Operator:** 200 (with a note: 'Fill in the extensions of operator (up to 5), separated by commas')
- Call distribution:** Sequential (selected), Circular, Simultaneous
- Press:** 0 (to transfer to attendant)
- Ring the phone:** 5 (times, and transfer to the attendant when the call is not answered)

**Table 2-1 Auto-attendant Parameters**

| Item                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operator            | Enter up to five operators' extension numbers, separated with “,”.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Call Distribution   | <p>Select a call distribution scheme below when there are more than one operator:</p> <ul style="list-style-type: none"> <li>• Sequential: terminate the incoming call to the first available extension on the operator list starting from the first one;</li> <li>• Circular: terminate the incoming call to the first available extension on the operator list in fixed order beginning from the last one left off;</li> <li>• Simultaneous: terminate the incoming call to all available extensions on the operator list simultaneously and the first one to pick up is connected.</li> </ul> |
| Call to an Operator | This dial prefix is used to call an operator. The default prefix is 0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Ring the phone      | When an incoming call is not answered after the set ring times, the device provides busy tone to the caller. The default ring time is 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## 2.2 Greetings

The device provides a greeting voice message to the caller when a call comes in, and the content of the greeting may vary depending on the time.

### 2.2.1 Factory Default Greetings

There are two default greetings, one for business hours and one for off-business hours, as shown in Table 2-2.

**Table 2-2 Default greeting files**

| Type               | File name | Content                                                                                                                    |
|--------------------|-----------|----------------------------------------------------------------------------------------------------------------------------|
| business hours     | welcome   | Thank you for calling. If you know your party's extension, please dial it now. Or, to transfer to an operator, press zero. |
| off-business hours | Off-hour  | Thank you for calling. Our office is closed. If you know the extension, please dial it now.                                |

### 2.2.2 Changing the Greetings

Three ways are provided to change the greetings:

- Synthesizing the greetings based on the text content.
- Recording the greetings via a phone connecting to the device.
- Uploading the prepared greeting files to the device.

#### Synthesizing greetings

This is a simple way to customize the greetings in Chinese or English with high voice quality. The synthesizing service is provided by the speech synthesis engine publically accessible on the Internet, offered by New Rock Technologies, Inc., and to perform the synthesis the device is required to connect to the Internet.

#### Step1 Enable the DNS service

Go to the **Basic > Network** page to enable/configure DNS server. See Figure 2-2.

**Figure 2-2 DNS service interface**

| Basic                                                                                          |  | Extension                           | Trunk | Mult-site                                                                                | System | Advance | Logs | Tools |
|------------------------------------------------------------------------------------------------|--|-------------------------------------|-------|------------------------------------------------------------------------------------------|--------|---------|------|-------|
| Status   <b>Network</b>   Dialing rule   Auto-attendant   Text to voice greeting   Domain name |  |                                     |       |                                                                                          |        |         |      |       |
| Host name                                                                                      |  | Officium10                          |       | Only letters (a-z), numbers (0-9) and dash (-) are allowed, and must start with a letter |        |         |      |       |
| Ethernet port                                                                                  |  |                                     |       |                                                                                          |        |         |      |       |
| MAC                                                                                            |  | 00:0E:A9:35:00:35                   |       |                                                                                          |        |         |      |       |
| IP address assignment                                                                          |  | DHCP <input type="checkbox"/>       |       |                                                                                          |        |         |      |       |
| IP address                                                                                     |  | 192.168.250.193                     |       |                                                                                          |        |         |      |       |
| Netmask                                                                                        |  | 255.255.0.0                         |       |                                                                                          |        |         |      |       |
| Gateway IP address                                                                             |  | 192.168.2.1                         |       |                                                                                          |        |         |      |       |
| DNS                                                                                            |  |                                     |       |                                                                                          |        |         |      |       |
| Enable                                                                                         |  | <input checked="" type="checkbox"/> |       |                                                                                          |        |         |      |       |
| Primary server                                                                                 |  | 192.168.2.1                         |       | e.g. 202.96.209.6                                                                        |        |         |      |       |
| Secondary server                                                                               |  | 192.168.2.133                       |       | e.g. 202.96.209.133                                                                      |        |         |      |       |

**Step2** Synthesizing the greeting file from text

Go to the **Basic > Text to voice greeting** page. Input the content of greeting in either English or Chinese and click **Start**.

**Figure 2-3 Interface to enter the text of greeting**

Basic | Extension | Trunk | Multi-site | System | Advanced | Logs | Tools

Status | Network | Dialing rule | Auto-attendant | **Text to voice greeting** | Domain name

Input the content of the greeting in either English or Chinese, and select the volume and speech speed. Click Start. The length of the content is limited to 500 words.

Voice type: Female in Chinese  
Speed: 5  
Volume: 5

**Start**

Business hour

| File name | Content | Phone listen | Operation |
|-----------|---------|--------------|-----------|
|           |         |              |           |

Non-Business hour

| File name | Content | Phone listen | Operation |
|-----------|---------|--------------|-----------|
|           |         |              |           |

**Step3** Play and save the file**Figure 2-4 Interface to save the greeting files**

Basic | Extension | Trunk | Multi-site | System | Advanced | Logs | Tools

Status | Network | Dialing rule | Auto-attendant | **Text to voice greeting** | Domain name

text to voice greeting

Play the voice file.

Save voice files.

Chinese  
Speed: 5  
Volume: 5

**Start** **Download&Listen** **Save as greeting for office hours** **Save as greeting for non-office hours**

Business hour

| File name | Content | Phone listen | Operation |
|-----------|---------|--------------|-----------|
|           |         |              |           |

Non-Business hour

| File name | Content | Phone listen | Operation |
|-----------|---------|--------------|-----------|
|           |         |              |           |

**Step4** Replacing the existing greeting file

Go to the **Basic > Auto-attendant** page to select the greeting file. See Figure 2-5.

**Figure 2-5 Interface to select greeting files**

Basic | Extension | Trunk | Multi-site | System | Advanced | Logs | Tools

Status | Network | Dialing rule | Auto-attendant | Text to voice greeting | Domain name

Auto attendant

Time schedule

☐ Customize ☒ Business hours only ☐ Non-business hours only

Monday to Monday Open (HH:MM) to

Greeting [Text to voice greeting](#)

Business hours welcome

Non-Business hours offhour

First digit timeout

Playing greeting message 0 times, waiting for 24 seconds before transferring to the attendant

Operator

Operator 200 Fill in the extensions of operator (up to 5), separated

Call distribution ☒ Sequential ☐ Circular ☐ Simultaneous

Press 0 to transfer to attendant

Ring the phone 5 times, and transfer to the attendant when the call is not answered

Secretary

☐ External call ☒ All call

Submit Refresh

**Step5 Managing the greeting files**

Go to the **Basic > Text to voice greeting** page for file management.

**Figure 2-6 Interface to managing the greeting files**

Basic | Extension | Trunk | Multi-site | System | Advanced | Logs | Tools

Status | Network | Dialing rule | Auto-attendant | Text to voice greeting | Domain name

Input the content of the greeting in either English or Chinese, and select the volume and speech speed. Click Start. The length of the content is limited to 500 words.

Start

Voice type Female in Chinese

Speed 5

Volume 5

| Business hour     |           | Phone listen | Operation                                   |
|-------------------|-----------|--------------|---------------------------------------------|
| File name         | Content   | *8231        | <a href="#">Delete</a> <a href="#">Edit</a> |
| welcome1          | welcome 1 |              |                                             |
| Non-Business hour |           | Phone listen | Operation                                   |
| File name         | Content   | *8241        | <a href="#">Delete</a> <a href="#">Edit</a> |
| offhour1          | welcome 2 |              |                                             |

**Recording the greeting file via a phone**

The greeting file can be recorded directly on a phone by using the operations listed in Table 2-3. To ensure the high quality, it is suggested to make the recording in a quiet room.

**Table 2-3 Recording the greeting file on a phone**

| Item      | Operation                                                                                                                                        |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Recording | Pick up any phone connecting to the device and press *81 to start the recording after the prompt, and hang up the phone to finish the recording. |
| Listen    | Press *8200 to listen to the voice recording                                                                                                     |

| Item                          | Operation                                                                                                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Save                          | <ul style="list-style-type: none"> <li>Press *8301 and hang up the phone to replace the welcome file, or</li> <li>Press *8302 and hang up the phone to replace the off-hour file.</li> </ul> |
| Play the latest greeting file | <ul style="list-style-type: none"> <li>Press *8201 to listen to welcome greetings;</li> <li>Press *8202 to listen to off-hour greetings.</li> </ul>                                          |
| Recovery                      | Press *8300 to recover replaced voice greeting file.                                                                                                                                         |

**Note**

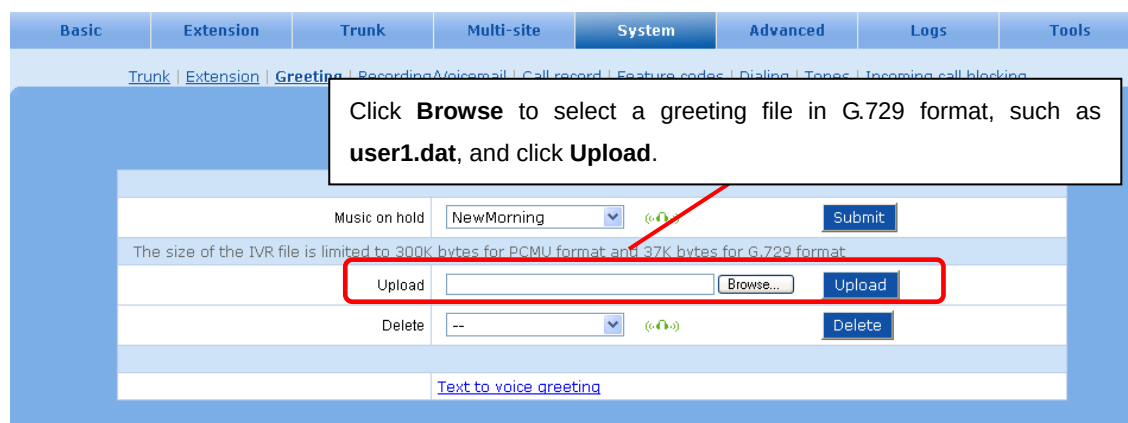
Never restart your device during recording.

### Uploading a prepared greeting file to the device

#### Step1 Uploading the file

Go to the **System > Greeting** page. See Figure 2-7.

**Figure 2-7 Greeting setting interface**

**Note**

- For G.711 voice file, the name should be in the format of userxxx.pcm, and for G.729 voice file should be in the format of userxxx.dat, where the xxx is a string of characters.
- An audio tool such as 'Cool Edit' can be used to transform the voice file into other formats, like G.711 or G.729.
- Restart the device after the uploading to take effect.

#### Step2 Replacing the default file with the new one

Go to the **Basic > Auto-attendant** page to select the greeting file. See Figure 2-5.

## 2.3 Greeting Repeat

The device plays a greeting to callers of incoming call and followed by a voice menu for callers to select the terminating party. While it waits for callers to enter the selection or enter an extension number it replays the greeting several times. By default, the device replays the greeting three times before it directs the calls to an operator for assistance. The greeting repeat can be set as shown in Fig. 2-8.

Go to the **Basic > Auto-attendant** page to set repeating times. See Figure 2-8.

**Figure 2-8 Auto-attendant interface**

The screenshot displays the 'Auto-attendant' configuration page within a web interface. The page has a top navigation bar with tabs: Basic, Extension, Trunk, Multi-site, System, Advanced, Logs, and Tools. Below this is a breadcrumb trail: Status > Network > Dialing rule > Auto-attendant > Text to voice greeting > Domain name. The main content area is titled 'Auto attendant' and contains several sections: 'Time schedule' with radio buttons for 'Customize', 'Business hours only' (selected), and 'Non-business hours only'; a date range selector set to 'Monday to Monday'; 'Greeting' options for 'Business hours' (welcome) and 'Non-Business hours' (offhour); 'First digit timeout' with a red box highlighting 'Playing greeting message' set to '0' times, waiting for '24' seconds; 'Operator' settings including 'Operator' (200), 'Call distribution' (Sequential), 'Press' (0), and 'Ring the phone' (5); and 'Secretary' settings with radio buttons for 'External call' and 'All call'. At the bottom are 'Submit' and 'Refresh' buttons.

## 2.4 Playing Greetings Depending on Business Hours

The business and off-business hours and their related greetings can be set.

Go to the **Basic > Auto-attendant** page to define the work schedule.

**Figure 2-9 Time schedule setting interface**

Auto attendant

Time schedule

☒ Customize ☐ Business hours only ☐ Non-business hours only

Monday to Friday Open (HH:MM) 09:00 to 18:00

Greeting [Text to voice greeting](#)

Business hours welcome

Non-Business hours offhour

First digit timeout

Playing greeting message 0 times, waiting for 24 seconds before transferring to the attendant

Operator

Operator 200 Fill in the extensions of operator (up to 5), separated

Call distribution ☒ Sequential ☐ Circular ☐ Simultaneous

Press 0 to transfer to attendant

Ring the phone 5 times, and transfer to the attendant when the call is not answered

Secretary

☒ External call ☐ All call

Submit Refresh

## 2.5 Assigning a Designated Greeting for a Trunk

In addition to the greeting of the auto-attendant, the device can associate a dedicate greeting to a specific trunk. When an incoming call arrives at the trunk, instead of the greeting of auto attendant the designated greeting is played to the caller.

Go to the **Trunk > Analog trunk** page to select a greeting from the drop-down list. See Figure 2-10.

**Figure 2-10 Greeting setting interface**

Basic Extension **Trunk** Multi-site System Advanced Logs Tools

Analog trunk | IP trunk | IP trunk registration

Batch Submit Refresh

Search Input phone number

| ID | Enable                              | Phone number | PRDET                    | DID | Outbound                                                                | Greeting | Recording                | CID detect               |
|----|-------------------------------------|--------------|--------------------------|-----|-------------------------------------------------------------------------|----------|--------------------------|--------------------------|
| 05 | <input checked="" type="checkbox"/> | 204          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input type="checkbox"/> |
| 06 | <input checked="" type="checkbox"/> | 205          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input type="checkbox"/> |
| 07 | <input checked="" type="checkbox"/> | 206          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | welcome  | <input type="checkbox"/> | <input type="checkbox"/> |
| 08 | <input checked="" type="checkbox"/> | 207          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | welcome1 | <input type="checkbox"/> | <input type="checkbox"/> |

## 3 Settings of Extensions

### 3.1 Making Outbound Calls

The device provides two dialing schemes to meet users' dial behavior:

- Making outbound call with prefix: when making an outbound call the user dials an extra digit to select the trunk followed by the destination number;
- Making outbound call without prefix: when making an outbound call the user dials directly the destination number.

The first scheme is the factory default, and the default prefixes are shown in Fig. 3-1. The dial scheme and related settings can be changed.

Go to the **Basic > Dialing rule** page. See Figure 3-1.

**Figure 3-1 Outbound calls setting interface**

**Table 3-1 Dial scheme parameters**

| Item    | Description                                                                                                                                                                                                                                                                                                                                                                       |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prefix  | Choose a Prefix for a specific route;                                                                                                                                                                                                                                                                                                                                             |
| Route   | <p>The device can provides different routes of outbound call for user to select</p> <ul style="list-style-type: none"> <li>• FXO: the Line port is selected to make the call to PSTN</li> <li>• IP: the SIP trunk is selected to make the call to PSTN</li> <li>• Route table: the route defined by routing table is used to make the call to PSTN</li> </ul>                     |
| Hunting | <p>If there is more than one analog trunk (Line), the line selection is made according to the following schemes.</p> <ul style="list-style-type: none"> <li>• Sequential: the first available line on the list is selected starting from the first one</li> <li>• Circular: the first available line on the list is selected beginning from the one left off last time</li> </ul> |



Note

When direct outward dialing is enabled, press \* before dialing another extension number.

## 3.2 Hunt Group

A hunt group is a set of extensions which are organized to process specific calls. When the dial prefix of the hunt group is dialed by the user the device terminates the call to an available extension in the hunt group. Users can dial the prefix, such as 1 for sales and 2 for support, in both voice menu of auto attendant and direct dialing.

Go to the **Basic > Dialing rule** page for hunt group setting.

**Figure 3-2 Hunt group setting interface**

**Table 3-2 Hunt group parameters**

| Item      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prefix    | Choose the prefix of a hunt group, like 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Hunting   | Select a hunting scheme of the group: <ul style="list-style-type: none"> <li>• Sequential: terminate the incoming call to the first available extension in the group starting from the first one;</li> <li>• Circular: terminate the incoming call to the first available extension in the group in fixed order beginning from the last one left off;</li> <li>• Simultaneous: terminate the incoming call to all available extensions in the group simultaneously and the first one to pick up is connected.</li> </ul> |
| Extension | Enter the extensions in the group, separated by a comma.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## 3.3 Outbound Call Barring

Each extension has an assigned privilege of making outbound call. When a user makes a call beyond its

restriction, the device rejects the call with a voice announcement. The definitions of restriction level are listed below.

Go to the **Extension > Analog ext.** page to define extension's restriction level. See Figure 3-3.

**Figure 3-3 Outbound call barring setting interface**

| ID | Ext. | Account | Group    | Role     | Call barring | Email | Mobile   | OT |
|----|------|---------|----------|----------|--------------|-------|----------|----|
| 01 | 200  | Name    | Password | Nickname | --           | User  | Int'l    |    |
| 02 | 201  |         |          |          | --           | User  | Prohibit |    |
| 03 | 202  |         |          |          | --           | User  | Intercon |    |
| 04 | 203  |         |          |          | --           | User  | Local    |    |

### 3.4 Group Call Pick up

The users are allowed to pick up a ringing phone of others in the same group by dialing \*56. The call pick up group can be set as follows.

**Step1** Create the name of a group

Go to the **Extension > Group** page to name the group.

**Figure 3-4 Group setting interface**

| ID | Group name | ID | Group name |
|----|------------|----|------------|
| 1  | software   | 2  |            |
| 3  |            | 4  |            |
| 5  |            | 6  |            |
| 7  |            | 8  |            |

**Step2** Assign a group to extensions

Go to the **Extension > Analog ext.** page to assign a group to extensions.

**Figure 3-5 Group assigning interface**

| ID | Ext. | Account | Group    | Role     |
|----|------|---------|----------|----------|
| 01 | 200  | Name    | Password | Nickname |
| 02 | 201  |         |          |          |
| 03 | 202  |         |          |          |
| 04 | 203  |         |          |          |

### 3.5 Fax

If you have fax machines to connect to the device, please follow the steps below.

#### Connecting a fax machine to the device

The fax machine is connected to a Phone port on the device.

#### Making a fax call

Pick up the phone on the fax machine and enter the receiving party's number or enter the prefix and followed by the receiving party's number, according to the dial scheme.

#### Fax related settings

To avoid the auto attendant, it is suggested to configure the extension as DID. That is, to bundle the line designated to the fax with the extension which connects to the fax machine.

Go to the **Advanced > Media** page to enable FoIP via IP trunk. See Figure 3-6.

**Figure 3-6 FAX setting interface**

The screenshot displays the 'Advanced > Media' configuration page. The 'Voice' section includes settings for Codec (PCM/20, PCMA/20), Min. RTP port (10010), Max. RTP port (10130), TOS/DSCP (0x0C), Min. jitter buffer (2), Max. jitter buffer (50), RTP drop SID (unchecked), and RTP destination address (From SDP global connection). The 'FoIP' section includes a radio button selection for T.38 (selected) and T.30, a Jitter buffer (250), Receiving port for FoIP (Use original voice port), ECM mode (unchecked), V.21 detection (checked), Receive gain (-6 dB), Transmit gain (0 dB), Packet size (30 ms), and Redundancy (4). A red box highlights the T.38/T.30 radio buttons and the ECM mode checkbox. A callout box points to the T.38/T.30 radio buttons with the text 'Select the fax mode offered by service provider.'

### 3.6 Soft Attendant Console

Soft attendant console provides the status of extensions and trunks, and the operators use it to transfer a call by just making a click on the console. The soft attendant console can be assigned to the extensions as an Operator.

Go to the **Extension > Analog ext.** page to assign the role of the extensions.

Figure 3-7 Soft attendant console setting interface

| ID | Ext. | Name | Password | Nickname | Group    | Role | Call barring | Email | Mobile | OT                                  |
|----|------|------|----------|----------|----------|------|--------------|-------|--------|-------------------------------------|
| 01 | 200  |      |          |          | --       | User | Int'l        |       |        | <input type="checkbox"/>            |
| 02 | 201  | 201  | 201      | sam      | software | User | Int'l        |       |        | <input checked="" type="checkbox"/> |
| 03 | 202  |      |          |          | software | User | Int'l        |       |        | <input type="checkbox"/>            |
| 04 | 203  |      |          |          | software | User | Int'l        |       |        | <input type="checkbox"/>            |



Note

The soft attendant console is a Windows-based software provided by New Rock.

### 3.7 Transferring an Incoming Call to an External Party

An incoming call is allowed to be transferred to an external party.

Go to the **Extension > Analog ext.** page to select **OT**. See Figure 3-8.

Figure 3-8 Outbound transfer setting interface

| ID | Ext. | Name | Password | Nickname | Group    | Role | Call barring | Email | Mobile | OT                                  |
|----|------|------|----------|----------|----------|------|--------------|-------|--------|-------------------------------------|
| 01 | 200  |      |          |          | --       | User | Int'l        |       |        | <input checked="" type="checkbox"/> |
| 02 | 201  | 201  | 201      | sam      | software | User | Int'l        |       |        | <input checked="" type="checkbox"/> |
| 03 | 202  |      |          |          | software | User | Int'l        |       |        | <input checked="" type="checkbox"/> |
| 04 | 203  |      |          |          | software | User | Int'l        |       |        | <input checked="" type="checkbox"/> |



Note

During an outbound transfer, two lines are used.

### 3.8 Other Features

The device provides dozens of features for extension users, such as call forwarding, speed dialing, color ring back tone, call forking, recording and etc. Some of the features are enabled as factory default and others need to be enabled by the administrator as shown in below.

Go to the **Extension > Analog ext. /IP ext.** page and click the icon  to set up other features of extension.

**Figure 3-9 Extension's feature setting interface**

Extension: FXS-1 ☒ Enable

Number: 200

Call barring: Int'l

PIN number ☐ Calling with PIN ☐

Account: Name  Password  Nickname

Group: --

Role: User

Email:

Mobile:

Call forwarding: Close

Forwarding number:

Color ring back:

Speed dial list:

Hot line: Disable Hot line number:

Forking number:

Incoming call blocking:  Input the reject number, and separate them

Sactrey extension:

Call monitoring: ☐ Call monitoring prohibit: ☐

☒ Call ID ☒ CID on call waiting ☐ Extension pickup ☒ Call waiting  
☒ Call hold ☒ Call transfer ☐ Outbound transfer ☐ Reverse battery  
☐ Permanent recording ☐ Recording on demand ☐ Do not disturb ☐ Distinctive ring

Enable features of each extension.

**Table 3-3 Extension feature related parameters**

| Item              | Description                                                                                                                                                                                                                                                                                                                  |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PIN number        | Using *33 & *99 to allow users to access the device with an external phone.                                                                                                                                                                                                                                                  |
| Calling with PIN  | Select it to enable the PIN on the extension. When the user needs to make outbound calls, the PIN should be entered before the calling number.                                                                                                                                                                               |
| Mobile            | Instead of PIN number a mobile phone number of the user can be used for auto authentication of *33 and *99 for external access.                                                                                                                                                                                              |
| Call forwarding   | Select one of the settings of call forwarding feature: <ul style="list-style-type: none"> <li>• Disable</li> <li>• Forwarding all calls to another phone</li> <li>• Forwarding unanswered calls to another phone</li> <li>• Forwarding all calls to voicemail</li> <li>• Forwarding unanswered calls to voicemail</li> </ul> |
| Forwarding number | Enter the destination number of forwarding calls. Depending on the outbound dial scheme a prefix may be required, separated from the phone number with comma.                                                                                                                                                                |
| Forking number    | The forking function allows the device to terminate a call simultaneously to the extension and another terminal. Enter the phone number of the terminal to enable the feature.                                                                                                                                               |

### 3.9 Secretary Assistant

A secretary's extension can be bundled with his or her manager's extension so that a call to the manager will be redirected to the secretary and further transferred to the manager's extension by the secretary.

**Step1** Input secretary's extension number

Enter into the manager's extension feature page, and input secretary's extension number.

**Figure 3-10 Extension feature interface**

|                                               |                                                         |                                            |                                                  |
|-----------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------|
| Extension                                     | FXS-1                                                   | Enable                                     | <input checked="" type="checkbox"/>              |
| Number                                        | 200                                                     |                                            |                                                  |
| Call barring                                  | Int'l                                                   |                                            |                                                  |
| PIN number                                    | Calling with PIN <input type="checkbox"/>               |                                            |                                                  |
| Account                                       | Name                                                    | Password                                   | Nickname                                         |
| Group                                         | --                                                      |                                            |                                                  |
| Role                                          | User                                                    |                                            |                                                  |
| Email                                         |                                                         |                                            |                                                  |
| Mobile                                        |                                                         |                                            |                                                  |
| Call forwarding                               | Close                                                   |                                            |                                                  |
| Forwarding number                             |                                                         |                                            |                                                  |
| Color ring back                               |                                                         |                                            |                                                  |
| Speed dial list                               |                                                         |                                            |                                                  |
| Hot line                                      | Disable                                                 | Hot line number                            |                                                  |
| Forking number                                |                                                         |                                            |                                                  |
| Incoming call blocking                        | Input the rejection number                              |                                            |                                                  |
| Secretary extension                           |                                                         |                                            |                                                  |
| Call monitoring                               | <input type="checkbox"/>                                |                                            |                                                  |
| Call monitoring prohibit                      | <input type="checkbox"/>                                |                                            |                                                  |
| <input checked="" type="checkbox"/> Call ID   | <input checked="" type="checkbox"/> CID on call waiting | <input type="checkbox"/> Extension pickup  | <input checked="" type="checkbox"/> Call waiting |
| <input checked="" type="checkbox"/> Call hold | <input checked="" type="checkbox"/> Call transfer       | <input type="checkbox"/> Outbound transfer | <input type="checkbox"/> Reverse battery         |
| <input type="checkbox"/> Permanent recording  | <input type="checkbox"/> Recording on demand            | <input type="checkbox"/> Do not disturb    | <input type="checkbox"/> Distinctive ring        |

**Step2** Select the mode of secretary assistant

Go to the **Basic > Auto-attendant** page and select secretary's pickup mode.

**Figure 3-11 Auto attendant configuration interface**

| Basic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Extension | Trunk | Multi-site | System | Advanced | Logs | Tools |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|------------|--------|----------|------|-------|
| <a href="#">Status</a>   <a href="#">Network</a>   <a href="#">Dialing rule</a>   <a href="#">Auto-attendant</a>   <a href="#">Text to voice greeting</a>   <a href="#">Domain name</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |            |        |          |      |       |
| <b>Auto attendant</b><br>Time schedule<br><input type="radio"/> Customize <input checked="" type="radio"/> Business hours only <input type="radio"/> Non-business hours<br>Monday to Monday Open (HH:MM)<br>Greeting <a href="#">Text to voice greeting</a><br>Business hours welcome<br>Non-Business hours offhour<br>First digit timeout<br>Playing greeting message 0 times, waiting<br>Operator<br>Operator 200<br>Call distribution <input checked="" type="radio"/> Sequential<br>Press 0 to transfer to attendant<br>Ring the phone 5 times, and transfer to the attendant when the call is not answered<br>Secretary<br><input type="radio"/> External call <input checked="" type="radio"/> All call<br><input type="button" value="Submit"/> <input type="button" value="Refresh"/> |           |       |            |        |          |      |       |

- External call: only external calls are transferred to the secretary.
- All call: any call is transferred to the secretary first.

Note: the secretary should use *explicit transfer* to transfer the call to the manager.

# 4 Trunk

## 4.1 Direct Inward Dialing (DID)

An extension can be bundled with a trunk line which is associated with a public phone number, and the device forwards the incoming call to the phone number to the corresponding extension.

Go to the **Trunk > Analog trunk** page. See Figure 4-1.

Figure 4-1 DID interface

Enter the extension number.

- DID only: only the extension can make outbound calls over the trunk.
- Allowed: other extensions can make outbound calls over the trunk.

| ID | Enable                              | Phone number | PRDET                    | DID | Outbound                                                                | Greeting | Recording                | CID detect               |
|----|-------------------------------------|--------------|--------------------------|-----|-------------------------------------------------------------------------|----------|--------------------------|--------------------------|
| 05 | <input checked="" type="checkbox"/> | 204          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input type="checkbox"/> |
| 06 | <input checked="" type="checkbox"/> | 205          | <input type="checkbox"/> | 201 | <input type="radio"/> Allowed <input checked="" type="radio"/> DID only | --       | <input type="checkbox"/> | <input type="checkbox"/> |
| 07 | <input checked="" type="checkbox"/> | 206          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input type="checkbox"/> |
| 08 | <input checked="" type="checkbox"/> | 207          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input type="checkbox"/> |

## 4.2 Caller ID Detection on Line Port

**Step1** Enable the caller ID detection feature.

Go to the **Trunk > Analog trunk** page to enable caller ID detection.

Figure 4-2 CID detect setting interface 1

Select CID detect.

Submit Refresh

Search Input phone number

| ID | Enable                              | Phone number | PRDET                    | DID | Outbound                                                                | Greeting | Recording                | CID detect                          |
|----|-------------------------------------|--------------|--------------------------|-----|-------------------------------------------------------------------------|----------|--------------------------|-------------------------------------|
| 05 | <input checked="" type="checkbox"/> | 204          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 06 | <input checked="" type="checkbox"/> | 205          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 07 | <input checked="" type="checkbox"/> | 206          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 08 | <input checked="" type="checkbox"/> | 207          | <input type="checkbox"/> |     | <input checked="" type="radio"/> Allowed <input type="radio"/> Prohibit | --       | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Step2** Select caller ID standard.

Go to the **System > Trunk** page to configure Caller ID detection mode.

Figure 4-3 CID detect setting interface 2

The central office sends caller ID either before or after ringing. The caller ID detection should be configured accordingly.

Note: when the device fails to detect the caller ID, different mode listed here should be tried out.

|                                  |                                                                      |
|----------------------------------|----------------------------------------------------------------------|
| Gain to IP                       | 0(dB)                                                                |
| Gain to PSTN                     | -3(dB)                                                               |
| Impedance                        | <input checked="" type="radio"/> Complex <input type="radio"/> 600 Ω |
| Outpulsing delay                 | 600                                                                  |
| Call ID detection mode           | After ringing B                                                      |
| Busy detection                   |                                                                      |
| Repeat                           |                                                                      |
| On-time                          | 350                                                                  |
| Off-time                         | 350                                                                  |
| Detect dual-frequency busy tones | <input type="checkbox"/>                                             |

Submit Refresh

## 4.3 SIP Trunk Registration to an ITSP

### Step1 Configure ISTP server related settings

Go to the **Trunk > IP trunk registration** page. See Figure 4-4.

Figure 4-4 IP trunk registration setting interface

Input information required by the service provider.

|                     |                                                                 |
|---------------------|-----------------------------------------------------------------|
| Registration        |                                                                 |
| Signaling port      | 5060 1~9999                                                     |
| Registration server | e.g. 168.33.134.51:5000                                         |
| Registration expire | 600 15~86400 (sec), default 600                                 |
| Proxy server        | localhost:5060 e.g. 168.33.134.51:5000 or www.sipproxy.com:5000 |

### Step2 Enter username and password

Go to the **Trunk > IP trunk** page. See Figure 4-5.

Figure 4-5 IP trunk setting interface

Enter phone number and password assigned by the service, and click **Add**.

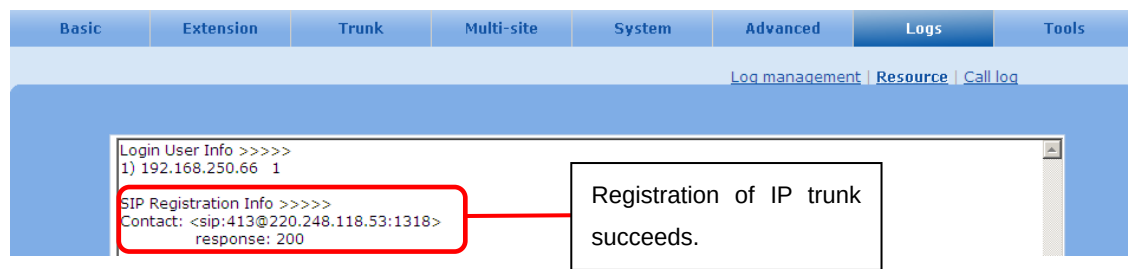
|              |      |
|--------------|------|
| ID           | 1    |
| Phone number | 8001 |
| Password     | .... |

Add Batch add

Batch Delete Submit Refresh

### Step3 Verify the registration status

After configuration, go to the **Logs > Resource** page to check the status of registration.

**Figure 4-6 Registration status interface**

## 5 Multi-site Telephony Network

Devices installed in one or multiple sites can be interconnected for the following purposes:

- Expanding the capacity of the facility;
- Making direct and free inter-site calling and making outbound call to PSTN via trunks on other devices.

### 5.1 Multi-site Network with Simple Dialing Scheme

In this simple form of multi-site network, inter-site calls are made by dialing the called party's extension without extra prefix digits. The dialing plan of this scheme is simple and straightforward, and therefore, it is suitable to applications in which multiple devices are stacked to expand the port capacity, and it is also suitable to form a private network of headquarter and its branch offices. The multi-site network with simple form requires a carefully designed numbering plan for each device to avoid potential number conflicts.

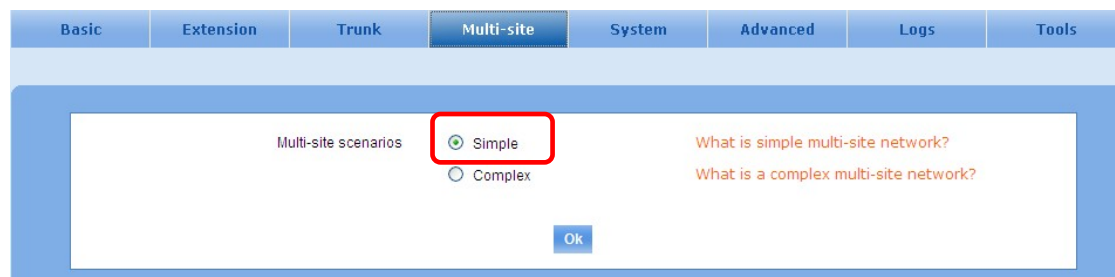
The configuration of multi-site network with simple form includes the configurations of the device on the managing site and the devices on regular sites. The device list of the multi-site network is maintained by the device on the managing site, which distributes the device list to the devices on the regular sites, illustrated as below.

#### The configuration on the managing site

##### Step1 Select multi-site network form

Go to the **Multi-site** page and select **Simple** as the scenario. See Figure 5-1.

Figure 5-1 Multi-site scenarios



##### Step2 Enable auto discovery of devices

**Figure 5-2 Auto discovery of devices**

The screenshot shows the 'Multi-site' tab in the configuration menu. A 'Note' section contains three instructions. Below it, the 'Device IP address discovery' checkbox is checked and highlighted with a red rectangle. To the right are 'Add', 'Delete', and 'Submit' buttons. At the bottom, there are input fields for 'IP address\*', 'Prefix\*', 'Area code', 'Pilot number', and 'Attendant console'.

**Step3** Add the managing site to the device list

Click **Add** to enter information of the managing site.

**Figure 5-3 Device list setting interface**

This screenshot shows the same 'Multi-site' configuration page, but with the 'Add' dialog box open. The dialog box contains fields for 'IP address', 'Prefix', and 'Attendant console', along with a checkbox for 'Whether to select a trunk for outbound calling on other devices'. The 'Add' button on the dialog is highlighted with a red rectangle. A callout box points to this button with the text: 'Click Add to input relevant information.'

**Table 5-1 Multi-site network parameters**

| Item                                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP address                                                      | IP address and port number of a device. Note: the address of the managing site must be set on the top of the list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Prefix                                                          | The expression of the extension numbers of the device. For example, 2/3 expresses 3-digit number started with 2.<br>Note: The numbering plans of devices involved in the network must be carefully examined to avoid potential number conflicts. A number conflict is a situation in which a prefix of an extension number on one device is identical to the prefix of an extension number on another device.<br>E.g.: suppose the expressions of device A and B are 2/3 and 21/3, respectively. When the user of device A dials 210, an extension in local, the call could be routed to device B. |
| Whether to select a trunk for outbound calling on other devices | Allow the trunks on the device to be used for outbound calling originated from other devices.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Area code                                                       | Fill in the area codes of the device. A call to the region covered by the area codes could be routed via the trunk of the device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Item         | Description                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------|
| Pilot number | Enter the pilot number of this device. When the IP connection is disconnected, the inter-site calling will be routed via PSTN. |

**Step4** Add other devices to the list

Click **Add** to input information of other devices in the network.

**Step5** Broadcast the device list

The managing site, which is on the top of the list, will send the latest device list to other devices in the network.

**Regular Site****Step1** Select multi-site network form

Go to the **Multi-site** page and select **Simple**. See Figure 5-1.

**Step2** Enable the auto discovery**Step3** Add managing device to the list

Click **Add** to input relevant information of managing site. See Figure 5-3.

**Step4** Add this device to the list

Click **Add** to input information of the device.

**Step5** Get the latest device list from managing site

The managing site, which is on the top of the list, will send the latest device list to other devices in the network.

## 5.2 Multi-site Network with Complex Dialing Scheme

In this scheme, special dialing digits are added at the front and the end of the destination number to avoid potential dialing number conflict. With this form, a large scaled multi-site telephony network can be built up, in which the numbering plan of each device can be managed independently.

### 5.2.1 Configuration of Managing Device

The managing device is one of the devices in the multi-site telephone network, which is responsible to

- Authenticate the devices in the network
- Maintain and broadcast the latest address information of devices
- Make change and broadcast the site prefix information
- Make change and broadcast the outbound trunk sharing information
- Response to the inquiry of the above information from other devices in the network

The procedure of configuring the managing device is illustrated below.

**Step1** Input the domain name of the managing device

Go to the **Basic > Domain name** page. Enter IP address of managing site and click **Submit**.

Figure 5-4 Domain name interface

Basic Extension Trunk Multi-site System Advanced Logs Tools

Status Network Dialing rule Auto-attendant Text to voice greeting Domain name

Domain name 192.168.250.88 e.g. 220.248.100.68 or myom.com

Domain name is used in SIP terminal registration and multi-site application.

Select a domain name based on network scenario:

Scenario 1: SIP terminals and the device are on the same network

- Fill in "Domain name" with device IP address or a stream of www.xxx.com format

Scenario 2: Some SIP terminals are registered from Internet

- Fill in "Domain name" with Internet domain name if the device has one
- Fill in "Domain name" with Internet address if the device has one
- If you already have a DDNS account, fill in the field with the DDNS domain name

Submit Refresh

**Step2** Select multi-site form

On **Multi-site** interface, select **Complex** for Multi-site scenarios, and click **OK**. See Figure 5-5.

Figure 5-5 Multi-site scenarios setting interface

Basic Extension Trunk Multi-site System Advanced Logs Tools

Multi-site scenarios

☐ Simple

☒ Complex

What is simple multi-site network?

What is a complex multi-site network?

Ok

**Step3** Select the role of a managing site

Select **Managing** as the role and click **Submit**.

Figure 5-6 Role selecting interface

Basic Extension Trunk Multi-site System Advanced Logs Tools

Select the role

☒ Managing

☐ Regular

What is a managing site?

What is a regular site?

Domain name of the device 192.168.250.88

Make the change on the [device domain](#) name interface.

Submit Quit

**Step4** Create the device list

Enter into the **Add and update sites** page. See Figure 5-7.

Figure 5-7 Device list setting interface

Basic Extension Trunk **Multi-site** System Advanced Logs Tools

Submit Return

Synchronization 1 Minutes

Security policies

List of site identities

The domain name of the device Site id Site name

|                 |    |        |        |
|-----------------|----|--------|--------|
| 192.168.250.88  | 10 | Manage | Delete |
| 192.168.250.124 | 11 |        |        |

Add site

Import Export

Site ID must be unique.

Input information of site identities relevant to domain name.

**Step5** Create or update the dialing prefix

Enter into the **Change prefix of multi-site calling** interface to create or change the dialing prefix.  
See Figure 5-8.

Figure 5-8 Prefix setting interface

Basic Extension Trunk **Multi-site** System Advanced Logs Tools

Submit Return

Change prefix of multi-site calling

Inter-site calling

Outbound calling with flexible route , with fixed route

**Note**

The domain name and the port number will be used in configuring the device list on managing site.

*Dialing prefix of inter-site calling* is dialed before the extension number of the remote site. For example, **#1-11-200#**, in which **1** is the prefix, **11** is the site id of the called party, and **200** is the extension of the called party.

*Dialing prefix of outbound calling* is dialed ahead of the destination number. For example by dialing **#1-11-8005551212#** the call to **8005551212** will be routed to PSTN through a trunk on site **11**, and by dialing **#2-8005551212#** the call to **8005551212** will be routed to PSTN through a trunk selected by the managing site.

**Step6** Configuration of trunk sharing

Go to **Trunk sharing management** interface.

**Figure 5-9 Trunk sharing interface**

The screenshot shows the 'Trunk sharing management' interface with three callout boxes:

- Callout 1:** "Add the devices which provide shared trunks to PSTN." points to the 'Site name' column.
- Callout 2:** "Enter the area codes of the reachable destination of the trunk." points to the 'Destinations' column.
- Callout 3:** "List the sites which are allowed to use the trunk." points to the 'Sites with permission' column.

| Site name       | Destinations | Sites with permission |                                               |
|-----------------|--------------|-----------------------|-----------------------------------------------|
| 192.168.250.88  | 021          | ALL                   | <a href="#">Change</a> <a href="#">Delete</a> |
| 192.168.250.124 | 010          | ALL                   | <a href="#">Change</a> <a href="#">Delete</a> |

[Add outbound trunks](#)

**Note**

Unless the site ID is dialed for the outbound call to PSTN, the device will search the allowed outbound trunk from the top of the list.

## 5.2.2 Regular Site

**Step1** Enter the device domain name

On the **Basic > Domain name** interface, enter domain name of regular sites and click **Submit** seen in Figure 5-10.

**Figure 5-10 Domain name setting interface**

The screenshot shows the 'Domain name' setting interface. The 'Domain name' field is highlighted with a red box and contains the value '192.168.250.124'. Below the field, there is a text box explaining the domain name usage and two scenarios for selection. At the bottom, there are 'Submit' and 'Refresh' buttons.

Domain name | 192.168.250.124 | e.g. 220.248.100.68 or myom.com

Domain name is used in SIP terminal registration and multi-site application

Select a domain name based on network scenario:

Scenario 1: SIP terminals and the device are on the same LAN

- Fill in "Domain name" with device IP address or a stream of www.xxx.com format

Scenario 2: Some SIP terminals are registered from Internet

- Fill in "Domain name" with Internet domain name if the device has one
- Fill in "Domain name" with Internet address if the device has one
- If you already have a DDNS account, fill in the field with the DDNS domain name

[Submit](#) [Refresh](#)

**Note**

The domain name and the port number will be used in configuring the device list on managing site.

**Step2** Select scenarios of the multi-site application

On **Multi-site** interface, select **Complex** and click **OK**.

**Figure 5-11 Interface of multi-site scenarios**

Multi-site scenarios

☐ Simple

☒ **Complex**

What is simple multi-site network?

What is a complex multi-site network?

Ok

**Step3** Select the role

Select **Regular** as the role and submit. See Figure 5-12.

**Figure 5-12 Interface of site role**

Select the role

☐ Managing

☒ **Regular**

What is a managing site?

What is a regular site?

Domain name of the device 192.168.250.124

Make the change on the [device domain](#) name interface.

Confirm the site identification 192.168.250.124 with the administrator of the network

Submit Quit

**Step4** Enter the IP address of managing site

On the **Managing site address** interface, enter IP address of the managing site.

**Figure 5-13 Managing site address interface**

Managing site address

IP address of the managing site 192.168.250.88:5060

Submit Return

When configuration succeeds, the icon turns green.

Figure 5-14 Multi-site networking status interface



## 6 Device Settings

### 6.1 Time

The device obtains its time from a time server in the network, and in case the time service is not available, the timer of the device can be set manually through the Web utility.

Go to the **Basic > System time** page.

**Figure 6-1 System time interface**

| Basic                                                                                          |  | Extension                                                                                                                                                                                                                                                                                                                                                                                        |  | Trunk                                                                                    |  | Multi-site |  | System |  | Advanced |  | Logs |  | Tools |  |
|------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------|--|------------|--|--------|--|----------|--|------|--|-------|--|
| Status   <u>Network</u>   Dialing rule   Auto-attendant   Text to voice greeting   Domain name |  |                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| Host name                                                                                      |  | Officium10                                                                                                                                                                                                                                                                                                                                                                                       |  | Only letters (a-z), numbers (0-9) and dash (-) are allowed, and must start with a letter |  |            |  |        |  |          |  |      |  |       |  |
| Ethernet port                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| MAC                                                                                            |  | 00:0E:A9:50:01:13                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| IP address assignment                                                                          |  | DHCP                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| IP address                                                                                     |  | 192.168.250.126                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| Netmask                                                                                        |  | 255.255.0.0                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| Gateway IP address                                                                             |  | 192.168.2.1                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| DNS                                                                                            |  | Enable <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| System time                                                                                    |  | <div> <div> <div>Current time</div> <div>2011-09-08 14:29:59</div> <div>YYYY-MM-DD HH:MM:SS</div> <div>Change</div> </div> <div> <div>Primary server</div> <div>192.43.244.18</div> </div> <div> <div>Secondary server</div> <div>198.60.22.240</div> </div> <div> <div>Query interval (min)</div> <div>120</div> </div> <div> <div>Time zone</div> <div>(GMT+08:00) Beijing</div> </div> </div> |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
| STUN                                                                                           |  | STUN Disabled                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |
|                                                                                                |  | <div>Submit</div> <div>Refresh</div>                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                          |  |            |  |        |  |          |  |      |  |       |  |



**Note**

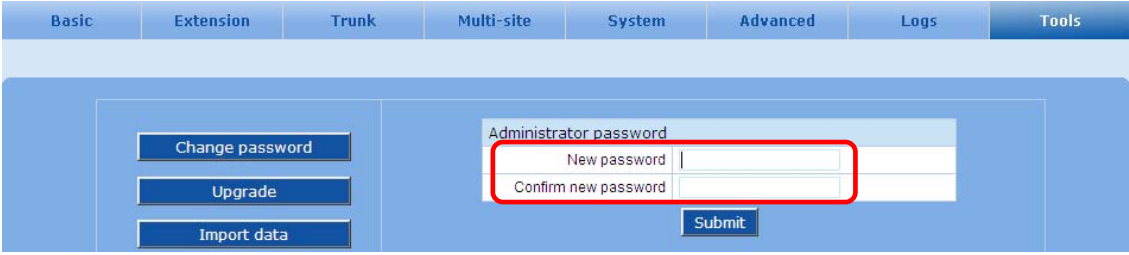
If the system fails to synchronize to the time server, click **Change** to manually set the time.

### 6.2 Changing the Administrator Password

It is strongly recommended to change your password after you login the Web utility the first time.

On the **Tools** interface, click **Change password** to modify administrator password.

Figure 6-2 Interface of changing password



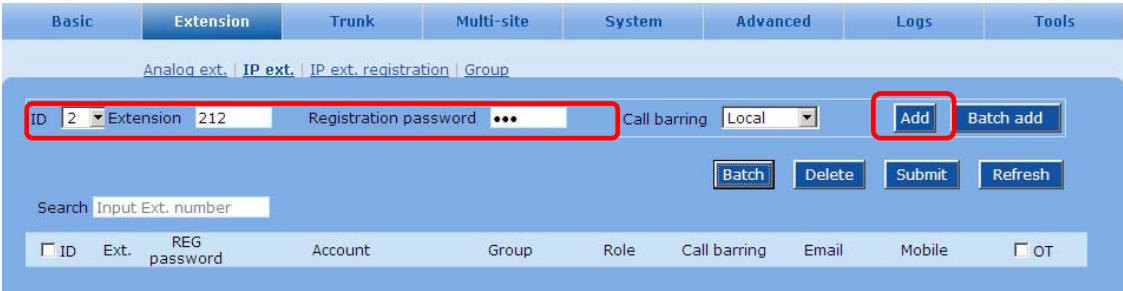
## 6.3 SIP Client Account

A SIP based voice terminal can be connected to the device, including softphone and SIP phone. After registering to the device, the SIP terminals can communicate to other terminals connected to the device, such as terminals on FXS ports, SIP phones, and remote terminals through analog trunks, tie trunks and SIP trunks.

A SIP account needs to be set up on the device for each SIP terminals. The device will reject any visit from a SIP terminal which fails in authentication.

On the **Extension > IP ext.** interface, click **Add** to register. See Figure 6-3.

Figure 6-3 IP extension interface



### Adding IP extension in bulk

Go to the **Extension > IP ext.** page, and click **Batch add** to input relevant information.

Figure 6-4 Adding IP extension in bulk interface

Click Batch add to fulfill relevant information.

Batch add

Line ID (Begin) 1

Extension number (Begin)

Number of lines

Password ☒ The same as extension number ☐ Randomly generated ☐ Same password

Account ☐ Account same as extension number; Account password same as register password

Using fixed IP

Submit Close

## 6.4 Call Recording and Voicemail

A file server is required in order to use call recording and voicemail functions. In addition, a mail server is required if the messages of the voicemail are forwarded to the receipts through email.

**Step1** Configure the file server and mail server addresses

On the **System > Recording/Voicemail** interface, enter relevant information of recording/mail server.

Figure 6-5 Recording/Voicemail interface

Record server

IP address 192.168.1.92:1311

Mail server

IP address 192.168.2.3 e.g. 192.168.45.32 or smtp.sohu.com

User name ppwang@newrocktec e.g. voicemail@sohu.com

Password ...

Note: Change the email address of receiving recording in [Analog extension](#) or [IP extension](#)

Submit Refresh

**Step2** Enable the recording function of an extension

On the **Extension > Analog/IP ext.** interface, click the icon  to enter into configuration page of extension and enable recording.

Figure 6-6 Interface of extension features

|                                               |                                                      |                                                   |                                            |                                          |                                     |
|-----------------------------------------------|------------------------------------------------------|---------------------------------------------------|--------------------------------------------|------------------------------------------|-------------------------------------|
| Extension                                     | FXS-1                                                |                                                   |                                            | Enable                                   | <input checked="" type="checkbox"/> |
| Number                                        | 200                                                  |                                                   |                                            |                                          |                                     |
| Call barring                                  | Int'l                                                |                                                   |                                            |                                          |                                     |
| PIN number                                    | Calling with PIN <input type="checkbox"/>            |                                                   |                                            |                                          |                                     |
| Account                                       | Name                                                 | Password                                          | Nickname                                   |                                          |                                     |
| Group                                         | --                                                   |                                                   |                                            |                                          |                                     |
| Role                                          | User                                                 |                                                   |                                            |                                          |                                     |
| Email                                         |                                                      |                                                   |                                            |                                          |                                     |
| Mobile                                        |                                                      |                                                   |                                            |                                          |                                     |
| Call forwarding                               | Close                                                |                                                   |                                            |                                          |                                     |
| Forwarding number                             |                                                      |                                                   |                                            |                                          |                                     |
| Color ring back                               |                                                      |                                                   |                                            |                                          |                                     |
| Speed dial list                               |                                                      |                                                   |                                            |                                          |                                     |
| Hot line                                      | Disable                                              |                                                   |                                            |                                          |                                     |
| Forking number                                |                                                      |                                                   |                                            |                                          |                                     |
| Incoming call blocking                        | Input the reject number, and separate them with ",". |                                                   |                                            |                                          |                                     |
| Secretary extension                           |                                                      |                                                   |                                            |                                          |                                     |
| Call monitoring                               | <input type="checkbox"/> Call monitoring             |                                                   |                                            |                                          |                                     |
| <input checked="" type="checkbox"/> Call ID   | <input checked="" type="checkbox"/> CID              | <input checked="" type="checkbox"/> Call transfer | <input type="checkbox"/> Outbound transfer | <input type="checkbox"/> Reverse battery |                                     |
| <input checked="" type="checkbox"/> Call hold | <input checked="" type="checkbox"/> Call transfer    | <input type="checkbox"/> Do not disturb           | <input type="checkbox"/> Distinctive ring  |                                          |                                     |
| <input type="checkbox"/> Permanent recording  | <input type="checkbox"/> Recording on demand         |                                                   |                                            |                                          |                                     |

Select **Permanent recording** to make recording to every call.

Select **Recording on demand** to allow the user to make recording during a call conversation by pressing \*#.

**Step3** Fill in mail server address

Go to the **Extension > Analog ext.** interface, and fill in mail server address.

Figure 6-7 Interface of mail server settings

| Basic                                                                                                                                                                   | Extension | Trunk | Multi-site | System                                                                     | Advanced | Logs | Tools |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|------------|----------------------------------------------------------------------------|----------|------|-------|
| Analog ext.   IP ext.   IP ext. registration   Group                                                                                                                    |           |       |            |                                                                            |          |      |       |
| Search Input<br><input type="checkbox"/> ID<br><input type="checkbox"/> 01<br><input type="checkbox"/> 02<br><input type="checkbox"/> 03<br><input type="checkbox"/> 04 |           |       |            | Batch Submit Refresh                                                       |          |      |       |
| Enter e-mail address in the box of <b>Email</b> to forward the call recording file or voicemail file to the user via email.                                             |           |       |            | Email Mobile OT                                                            |          |      |       |
| 201 software User Int'l                                                                                                                                                 |           |       |            | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |          |      |       |
| 202 software User Int'l                                                                                                                                                 |           |       |            | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |          |      |       |
| 203 software User Int'l                                                                                                                                                 |           |       |            | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |          |      |       |



Note

Users can listen and manage the voice files through the application running on the recording server.

## 6.5 Analog Trunk Port Settings

The parameters relate to the volume, the caller ID detection, and busy tone detection of a trunk. There is no need to make changes to the default values, unless there is an issue with one of the functions.

Go to the **System > Trunk** page to configure related parameters of trunk.

Figure 6-8 Trunk setting interface

During the process of dialing out, DTMF out pulsing is started 600ms after hook-off. The shorter the delay, the higher the probability of missing digits on the CO side will be.

## 6.6 Analog Phone Port Settings

The parameters are provided to have better interconnection with analog phones from different vendors. There is no need to make changes to the default values, unless there are issues with voice volume, hook-flash and caller ID sent to the phone.

Go to the **System** > **Extension** page to configure related parameters of an analog phone port.

Figure 6-9 Analog phone port setting interface

During the process of dialing out, DTMF out pulsing is started 600ms after hook-off. The shorter the delay, the higher the probability of missing digits on the CO side will be.

## 6.7 DTMF

Go to the **Advanced** > **System** page to configure DTMF parameters.

Figure 6-10 DTMF setting interface

| Basic                    | Extension | Trunk    | Multi-site | System | Advanced | Logs | Tools |
|--------------------------|-----------|----------|------------|--------|----------|------|-------|
| DTMF                     |           |          |            |        |          |      |       |
| DTMF method              |           | RFC 2833 |            |        |          |      |       |
| 2833 payload type        |           | 101      |            |        |          |      |       |
| Sending DTMF on-time     |           | 100      |            |        |          |      |       |
| Sending DTMF off-time    |           | 100      |            |        |          |      |       |
| DTMF detection threshold |           | 48       |            |        |          |      |       |
| DTMF detection adjust    |           | 16       |            |        |          |      |       |

RFC2833, inband, and SIP INFO are supported for transmitting DTMF signals. When RFC2833 is chosen, the payload type should be configured, which is 101 by default.

DTMF detection threshold/adjust are used for DTMF reception.

## 6.8 Voice Media Settings

Go to the **Advanced > Media** page to configure media related parameters.

Figure 6-11 Media setting interface

| Basic                                                                        | Extension | Trunk                                                                                                       | Multi-site | System | Advanced | Logs | Tools |
|------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------|------------|--------|----------|------|-------|
| System   <b>Media</b>   SIP   Routing   Encryption                           |           |                                                                                                             |            |        |          |      |       |
| Voice                                                                        |           |                                                                                                             |            |        |          |      |       |
| Codec                                                                        |           | PCMU/20,PCMA/20 G729A/20, PCMU/20, PCMA/20                                                                  |            |        |          |      |       |
| Min. RTP port                                                                |           | 10010 3000~65535                                                                                            |            |        |          |      |       |
| Max. RTP port                                                                |           | 10130 3020~65535                                                                                            |            |        |          |      |       |
| TOS/DSCP                                                                     |           | 0x0C ?                                                                                                      |            |        |          |      |       |
| Min. jitter buffer                                                           |           | 2 0~30 (frame), default 3. Higher value results in long delay                                               |            |        |          |      |       |
| Max. jitter buffer                                                           |           | 50 10~250 (frame), default 50                                                                               |            |        |          |      |       |
| RTP drop SID                                                                 |           | <input type="checkbox"/>                                                                                    |            |        |          |      |       |
| RTP destination address                                                      |           | <input checked="" type="radio"/> From SDP global connection <input type="radio"/> From SDP media connection |            |        |          |      |       |
| FoIP                                                                         |           |                                                                                                             |            |        |          |      |       |
|                                                                              |           | <input checked="" type="radio"/> T.38 <input type="radio"/> T.30                                            |            |        |          |      |       |
| Jitter buffer                                                                |           | 250 0~1000 (ms), default 250                                                                                |            |        |          |      |       |
| Receiving port for FoIP                                                      |           | <input type="radio"/> Open a new port <input checked="" type="radio"/> Use original voice port              |            |        |          |      |       |
| ECM mode                                                                     |           | <input type="checkbox"/> Error Correction Mode                                                              |            |        |          |      |       |
| V.21 detection                                                               |           | <input checked="" type="checkbox"/>                                                                         |            |        |          |      |       |
| Receive gain                                                                 |           | -6 (dB)                                                                                                     |            |        |          |      |       |
| Transmit gain                                                                |           | 0 (dB)                                                                                                      |            |        |          |      |       |
| Packet size                                                                  |           | 30 (ms)                                                                                                     |            |        |          |      |       |
| Redundancy                                                                   |           | 4                                                                                                           |            |        |          |      |       |
| <input type="button" value="Submit"/> <input type="button" value="Refresh"/> |           |                                                                                                             |            |        |          |      |       |

Table 6-1 Description of media parameters

| Item          | Description                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Codec         | Valid values are G729A/20, PCMU/20 and PCMA/20, and multiple codecs can be entered, separating with a comma.                              |
| Min. RTP port | The lower bound of RTP transmission and receiving port. The valid range is 10010-10500.                                                   |
| Max. RTP port | The upper bound of RTP transmission and receiving port. This value must be greater than or equal to "2× number of lines + min. RPT port". |
| TOS/DSCP      | This parameter specifies the priorities of media stream.                                                                                  |

| Item                    | Description                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Min. jitter buffer      | Used to reduce the impact of network jitter.                                                                                                                                                                                                                                                                                                                                                   |
| Max. jitter buffer      |                                                                                                                                                                                                                                                                                                                                                                                                |
| RTP drop SID            | If it is selected the received RTP SID voice packets will be discarded. By default, SID voice packets will not be dropped.                                                                                                                                                                                                                                                                     |
| RTP destination address | <p>This parameter specifies how to obtain the IP address of the receiving side for RTP packets. By default, the IP address is obtained "From SDP global connection".</p> <ul style="list-style-type: none"> <li>From SDP global connection: obtain the IP address from SDP global connection;</li> <li>From SDP media connection: obtain the IP address from SDP media description.</li> </ul> |

## 6.9 SIP Related Advanced Settings

Go to the **Advanced** > **SIP** page to configure advanced SIP parameters.

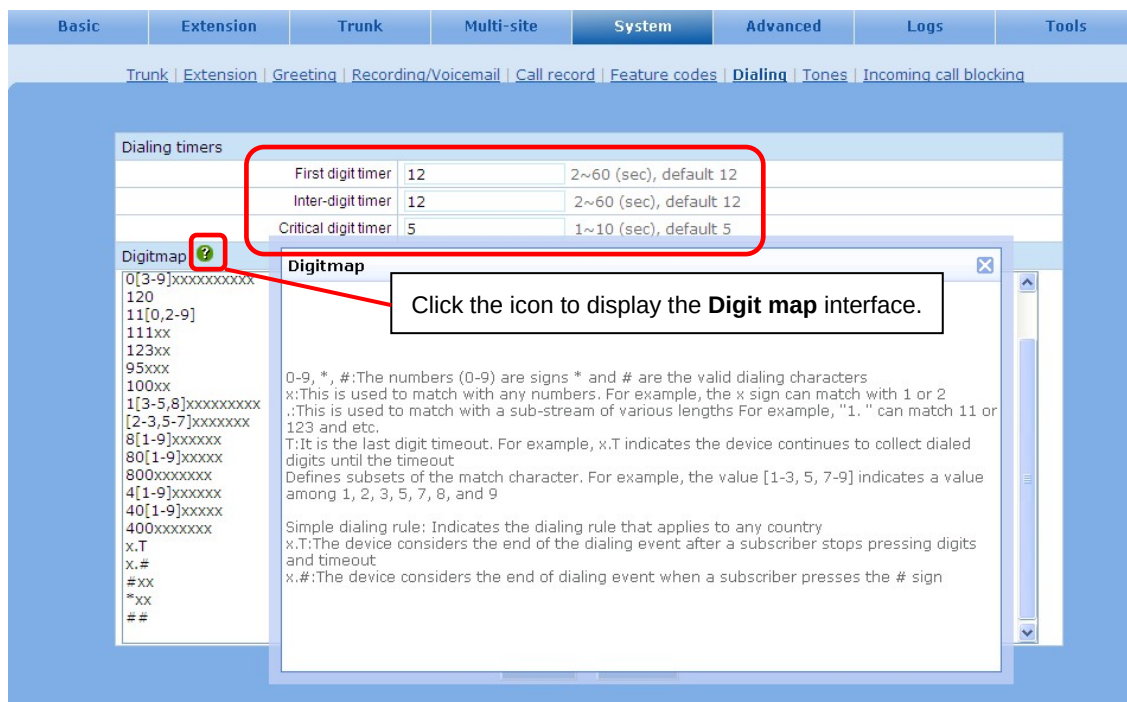
**Figure 6-12 SIP related advanced setting interface**

## 6.10 Dial Number Detection and Digit Map

A digit map consists of a set of digit strings, called rules, which describe the dialing plan of the device. During the process of collecting DTMF digits, the device matches the receiving digit string with the rules in the digit map. The receiving process is completed when a match situation is encountered. A well defined digit map helps to speed up the call setup.

Go to the **System** > **Dialing** page seen in Figure 6-13.

Figure 6-13 Dialing interface



A digit map in the device is composed with up to sixty rules each with up to 32 digits, and the total length of a digit map is limited to 2280 digits. The rules in the factory default digit map covers the dialing patterns of feature keys, such as \*30, and others. The syntax of digit map is illustrated as below.

Table 6-2 Description of Digit map

| Character    | Description                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------|
| 0-9, *, #    | Match to specific a DTMF signal.                                                                                          |
| x            | Match to any 1-digit DTMF signal. E.g.: x can be matched to 1 or 2.                                                       |
| .            | Match to any string of DTMF signals.                                                                                      |
| T            | End of collecting DTMF digits after timeout of waiting for next digit                                                     |
| [ ]          | Match to a set of DTMF digits. For example,[1-3, 5, 7-9] means the set of 1, 2, 3, 5, 7, 8 and 9.                         |
| x.T          | Match to a string a DTMF string with any length, and the ending is triggered by the timeout of waiting for the next digit |
| x.#          | Match to a DTMF string with any length ended with #                                                                       |
| [2-8]xxxxxxx | Match to an 8-digit string starting with of any number between 2 and 8                                                    |
| 02xxxxxxx    | Match to an 11-digit string starting with 02                                                                              |
| 013xxxxxxx   | Match to a 12-digit string starting with 013                                                                              |
| 13xxxxxxx    | Match to an 11-digit string starting with 13                                                                              |
| 11x          | Match to a 3-digit string starting with 11                                                                                |
| 9xxxx        | Match to a 5-digit string starting with 9                                                                                 |

## 6.11 Feature Codes

Go to the **System > Feature codes** page seen in Figure 6-14.

Figure 6-14 Feature codes interface

| Basic                                                                                                                                                                                                                                                                       | Extension | Trunk | Multi-site | System               | Advanced | Logs    | Tools |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|------------|----------------------|----------|---------|-------|
| <a href="#">Trunk</a>   <a href="#">Extension</a>   <a href="#">Greeting</a>   <a href="#">Recording/Voicemail</a>   <a href="#">Call record</a>   <a href="#">Feature codes</a>   <a href="#">Dialing</a>   <a href="#">Tones</a>   <a href="#">Incoming call blocking</a> |           |       |            |                      |          |         |       |
| System feature codes ?                                                                                                                                                                                                                                                      |           |       |            |                      |          |         |       |
| Query IP address                                                                                                                                                                                                                                                            |           | # #   |            | IP address setup     |          | *90     |       |
| Extension number setup                                                                                                                                                                                                                                                      |           | *96   |            | Query phone number   |          | #00     |       |
| IVR management ?                                                                                                                                                                                                                                                            |           |       |            |                      |          |         |       |
| Recording                                                                                                                                                                                                                                                                   |           | *81   |            | Listen               |          | *82     |       |
| Save                                                                                                                                                                                                                                                                        |           | *83   |            |                      |          |         |       |
| Feature codes ?                                                                                                                                                                                                                                                             |           |       |            |                      |          |         |       |
| Call park                                                                                                                                                                                                                                                                   |           | *30   |            | Unpark               |          | #30     |       |
| Call pickup                                                                                                                                                                                                                                                                 |           | *51   |            | Operator call pickup |          | *50     |       |
| Directed call pickup                                                                                                                                                                                                                                                        |           | *55   |            | Group pickup         |          | *56     |       |
| Calling authorization                                                                                                                                                                                                                                                       |           | *33   |            | Blind call transfer  |          | *38     |       |
| 3-Way                                                                                                                                                                                                                                                                       |           | *79   |            | Call monitoring      |          | *34     |       |
| Speed prefix                                                                                                                                                                                                                                                                |           | **    |            | Recording on demand  |          | *#      |       |
| Activating features ?                                                                                                                                                                                                                                                       |           |       |            |                      |          |         |       |
| Forking                                                                                                                                                                                                                                                                     |           | *75   |            | Speed dialing        |          | *74     |       |
| Extension lock                                                                                                                                                                                                                                                              |           | *77   |            | Allow call pickup    |          | *73     |       |
| Do not disturb                                                                                                                                                                                                                                                              |           | *72   |            | Call waiting         |          | *64     |       |
| Secretary extension                                                                                                                                                                                                                                                         |           | *35   |            |                      |          |         |       |
| Submit                                                                                                                                                                                                                                                                      |           |       |            | Refresh              |          | Default |       |



Note

Number conflicts must be avoided while making changes to feature codes.

## 6.12 Call Detailed Record

The device is capable to output a detailed record for each call to an external storage server. The information of a detailed call record includes, among many, the calling party number, called party number, the starting and the ending timestamps of a call.

The detailed call records are output to a storage server after the completion of calls, and they can be read, searched, saved and deleted through off-line software.

Go to the **System > Call record** page seen in Figure 6-15.

Figure 6-15 CDR server setting interface

| Basic                                                                                                                                                                                                                                                                       | Extension | Trunk                                                                      | Multi-site | System  | Advanced | Logs | Tools |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------|------------|---------|----------|------|-------|
| <a href="#">Trunk</a>   <a href="#">Extension</a>   <a href="#">Greeting</a>   <a href="#">Recording/Voicemail</a>   <a href="#">Call record</a>   <a href="#">Feature codes</a>   <a href="#">Dialing</a>   <a href="#">Tones</a>   <a href="#">Incoming call blocking</a> |           |                                                                            |            |         |          |      |       |
| CDR server                                                                                                                                                                                                                                                                  |           |                                                                            |            |         |          |      |       |
| IP address                                                                                                                                                                                                                                                                  |           |                                                                            |            |         |          |      |       |
| Filter                                                                                                                                                                                                                                                                      |           | <input type="radio"/> None <input checked="" type="radio"/> Internal calls |            |         |          |      |       |
| Submit                                                                                                                                                                                                                                                                      |           |                                                                            |            | Refresh |          |      |       |

## 6.13 Selective Inbound Call Blocking

A black list of phone numbers can be set on the device to block un-wanted incoming calls.

Go to the **System > Incoming call blocking** page seen in Figure 6-16.

**Figure 6-16 Incoming call blocking interface**

| ID | Blocked phone numbers | ID | Blocked phone numbers |
|----|-----------------------|----|-----------------------|
| 1  | 201                   | 2  |                       |
| 3  |                       | 4  |                       |
| 5  |                       | 6  |                       |
| 7  |                       | 8  |                       |
| 9  |                       | 10 |                       |
| 11 |                       | 12 |                       |
| 13 |                       | 14 |                       |
| 15 |                       | 16 |                       |
| 17 |                       | 18 |                       |
| 19 |                       | 20 |                       |
| 21 |                       | 22 |                       |
| 23 |                       | 24 |                       |
| 25 |                       | 26 |                       |
| 27 |                       | 28 |                       |
| 29 |                       | 30 |                       |



### Note

- Up to thirty numbers can be listed.
- The device provides the busy tone if the caller is on the blocking list.
- Caller ID detection feature should be enabled for this feature to take effect.

## 6.14 Outbound Call Screening

During the processing of an outbound call, the device screens the received dial number against two screening tables, one is white list and the other is black list.

### White list

An outbound call with the dial number on the list is allowed to make regardless of the outbound restriction of the extension.

### Black list

An outbound call with the dial number on the list is blocked.

Go to the **Advanced > System** page seen in Figure 6-17.

**Figure 6-17 Interface of call screening**

Basic | Extension | Trunk | Multi-site | System | **Advanced** | Logs | Tools

System | Media | SIP | Routing | Encryption

**DTMF**

|                          |          |                           |
|--------------------------|----------|---------------------------|
| DTMF method              | RFC 2833 |                           |
| 2833 payload type        | 101      | 96-127, default 100       |
| Sending DTMF on-time     | 100      | 20-3000 (ms), default 100 |
| Sending DTMF off-time    | 100      | 20-3000 (ms), default 100 |
| DTMF detection threshold | 48       | 32-96 (ms), default 48    |
| DTMF detection adjust    | 16       | (ms)                      |

**Call filter**

|               |    |                                                           |
|---------------|----|-----------------------------------------------------------|
| White list    |    | Outbound calls that will never be prohibited (white list) |
| Black list    |    | Outbound calls that will be prohibited (black list)       |
| Domestic      | 0  |                                                           |
| International | 00 |                                                           |

**The local area code**

|                            |  |                                                       |
|----------------------------|--|-------------------------------------------------------|
| Area code of analog trunks |  | The local area code associated with the analog trunks |
| Area code of IP trunks     |  | The local area code associated with the IP trunks     |

Submit Refresh

Enter phone numbers separated by |.

# 7 Maintenance

## 7.1 Firmware Upgrading

**Step1** Select the **Tools > Upgrade** page, seen in Figure 7-1.

**Step2** Click **Browse** to select the upgrade package.

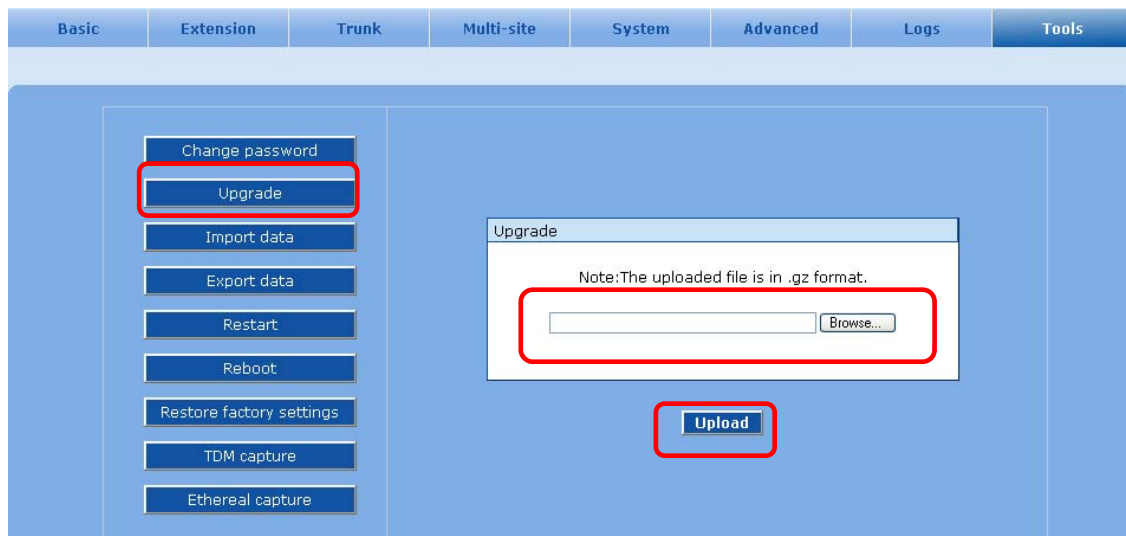
**Step3** Click **Upload** to upload the package to the system.



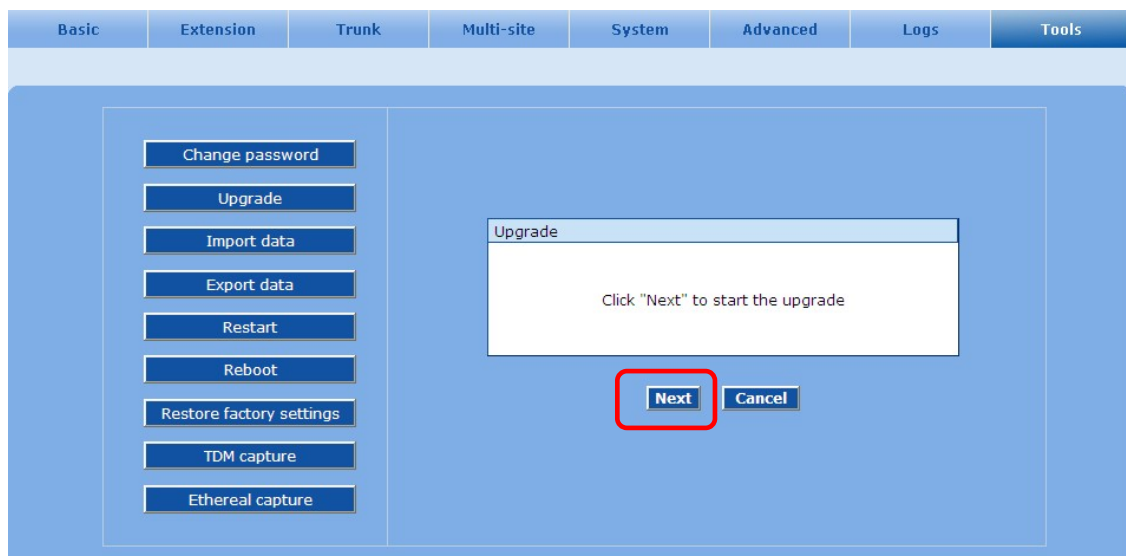
Note

Please contact the supplier to obtain the latest firmware release.

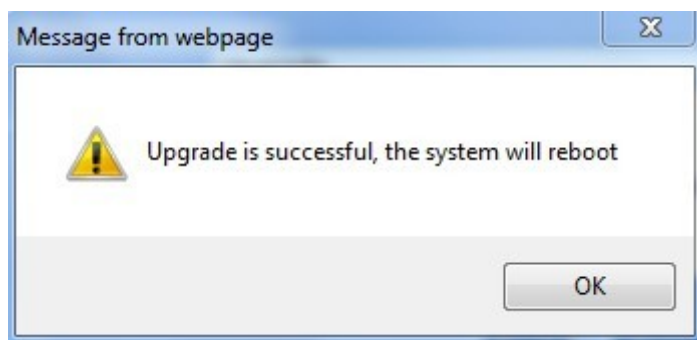
Figure 7-1 Firmware upgrading interface



**Step4** After uploading, click **Next** to upgrade the system.

**Figure 7-2 Interface of upgrade firmware**

**Step5** When the prompt *Upgrade is successful, the system will reboot* is shown up, click **OK** to finish the process of upgrade.

**Figure 7-3 Firmware upgrading interface**

## 7.2 System Reboot

**Step1** Go to the **Tools > Restart** page, seen in Figure 7-4.

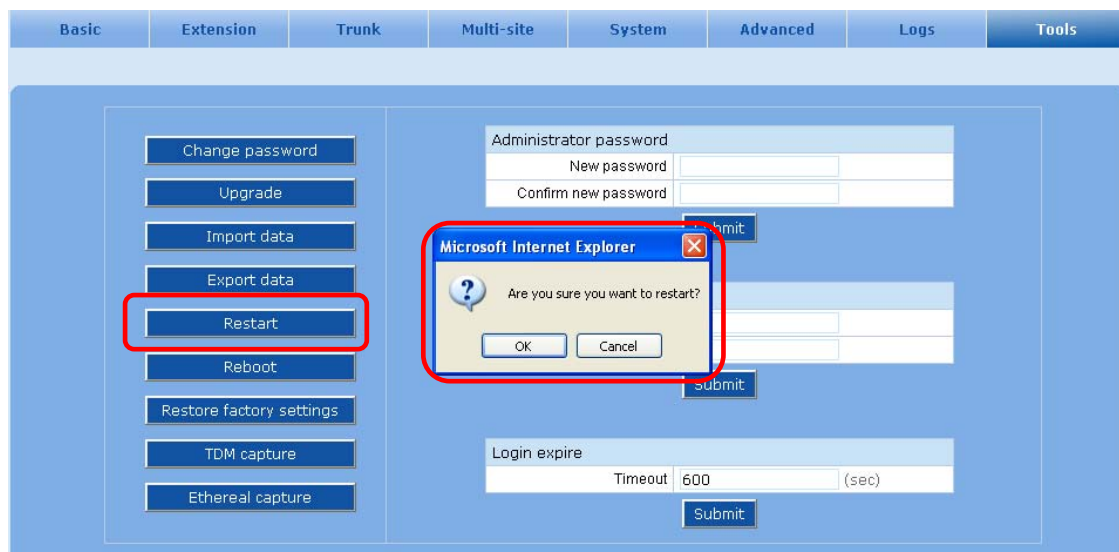
**Step2** Click **OK** to restart the system.



**Note**

It takes around two minutes to restart the system.

Figure 7-4 System restarting interface



## 7.3 Export Configuration Files

**Step1** Go to the **Tools > Export data** page seen in Figure 7-5.

**Step2** Click **Download** to download and save files to the destination you select.

Figure 7-5 Exporting configuration files interface



### Note

By default, downloaded file will be named after **t1.tar.gz**, then **t2.tar.gz** and so on. Recounting begins after restart.

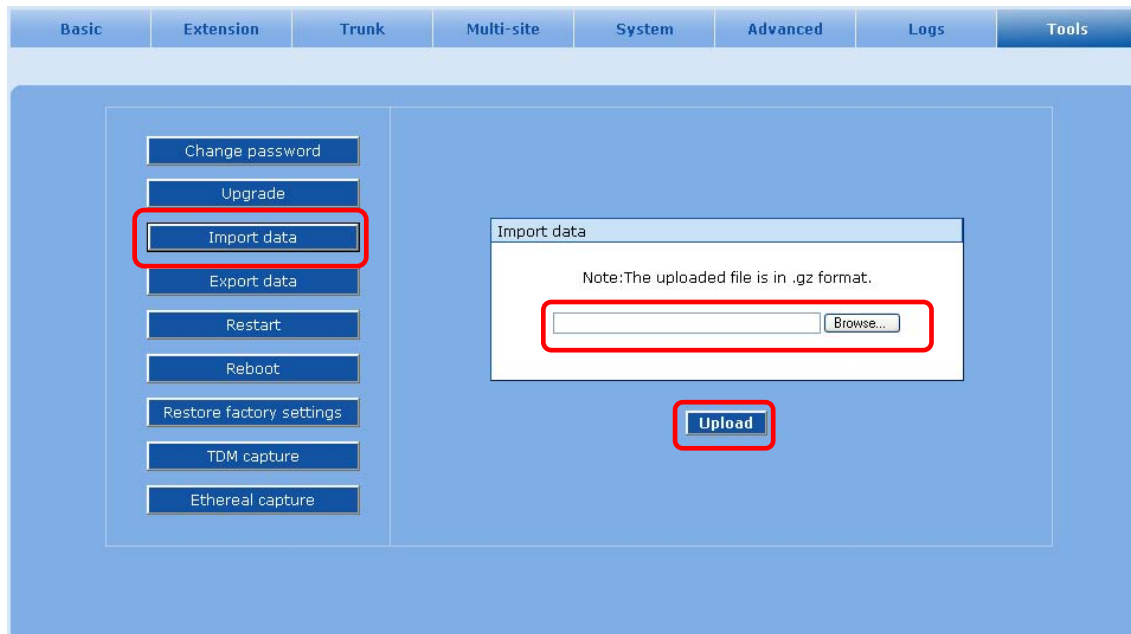
## 7.4 Import Configuration Files

**Step1** Go to the **Tools > Import data** page seen in Figure 7-6.

**Step2** Click **Browse** to select the packet, like t2.tar.gz.

**Step3** Click **Upload** to import data, referring [7.1 Firmware Upgrading](#).

Figure 7-6 Importing configuration files interface



## 8 Appendix: Registering a SIP Terminal to OM

### 8.1 Softphone

CounterPath's SIP-based softphone X-Lite 3.0 is used to illustrate the configuration steps.

**Step1** Create an account for the softphone

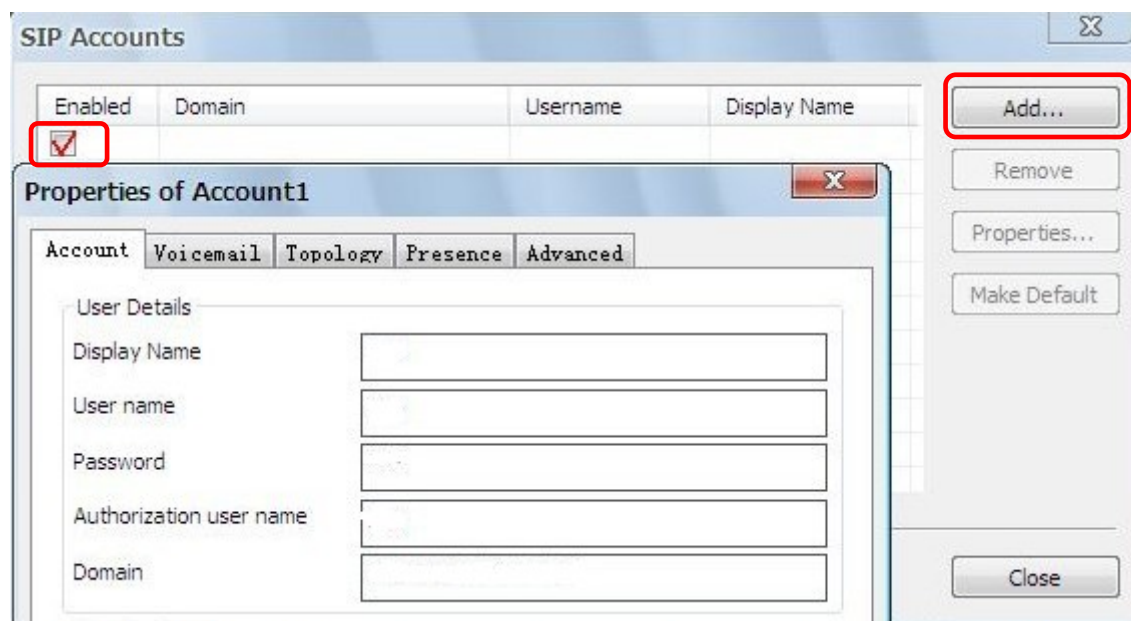
Go to the **Extension > IP ext.** page and enter the extension number and registration password.

**Figure 8-1** Account creating interface

| ID | Ext. | REG password | Account | Group | Role | Call barring | Email | Mobile | OT |
|----|------|--------------|---------|-------|------|--------------|-------|--------|----|
| 01 | 210  | 210          | Name    |       | User | Local        |       |        |    |

**Step2** Logon to the Web configuration page of X-Lite

Enter into the SIP configuration page. Click the button **Add...** popping up an interface of **Properties of Account**.

**Figure 8-2 X-Lite login interface**

**Step3** Input registration information of the softphone

Click **Account** and fill out the fields shown in Fig.8-3.

Figure 8-3 X-Lite registration interface

**Properties of Account1**

Account Voicemail Topology Presence Advanced

User Details

Display Name 210

User name 210

Password \*\*\*\*

Authorization user name 210

Domain 192.168.250.97:5060

Domain Proxy

☒ Register with domain and receive incoming calls

Send outbound via:

☐ domain

☐ proxy Address

☒ target domain

Dialing plan #1\|a|.T;match=1;prestrip=2;

Input the IP address of OM followed by default port number 5060.

## 8.2 SIP Phone

Take a SIP phone from Escene Communication as an example to illustrate the setting steps.

### Step1 Assign extension number

Go to the **Extension > IP ext.** page to enter extension number and registration password. See Figure 8-1.

### Step2 Configure SIP phone

Enter IP address of SIP phone to login the configuration interface.

Figure 8-4 SIP phone configuration interface

**SIP**

Enable: ☒

Account Mode:

Display Name:

Username:  \*

Authenticate Name:

Password:  \*

Label:

SIP Server:

Secondary server:

OutboundProxy Server:

NAT Traversal:

STUN Server:

Register Method: ☒ SIP ☐ TEL

Subscribe Period:  Default: 3600s, Min: 20s

Register Expire Time:  Default: 3600s, Min: 40s

SIP Transport: ☒ UDP ☐ TCP ☐ TLS

Enter IP extension number and password.

Input IP address of OM followed by default port number 5060.

**Note**

- While configuring IP extension, please enable G.729 codec and select the same DTMF transmission mode written on interface of **Advanced > System**.
- After configuration, go to the **Basic > Status** page to check the status of IP extension.